

Canadian Railway and Marine World

December, 1915.

Canadian Northern Bridges Over the Carp, Mississippi and Ottawa Rivers and Stoney Creek.

On the Canadian Northern Ry.'s main transcontinental line, about 35 miles west of Ottawa, are four closely located bridges. The first bridge, over the Carp River, consists of two 75 ft. half through girder spans with a 200 ft. truss span between them. The next crossing, the Mississippi River, is of two 75 ft. half through and a

girder span was first erected, then the bottom chords and floor system of the truss span were placed in position as fast as the falsework was built. The trusses were erected by a locomotive crane after the floor system was completed. An air hammer was used for driving the piles, air being supplied by a steam compressor, which was also used

each, and were erected by using a gallows frame, in connection with the 50 ton locomotive crane.

Piles were driven at Stoney Creek, on which a temporary track was constructed, and the girders carried into place from a side track by the locomotive crane. These girders weighed about 25 tons each. This



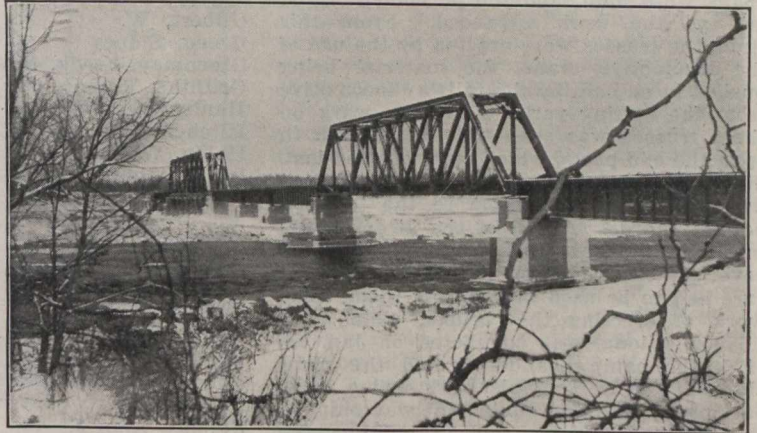
Carp River Bridge.

121½ ft. half through girder span, between the two 75 ft. spans. A mile farther down is the Stoney Creek bridge, which had three 85 ft. half through girder spans. The fourth is a long crossing over the Chats Rapids of the Ottawa River, and is made up of 10 deck girder spans, including 5 plate girder spans each 115 ft. long, 2 of 121½ ft.,

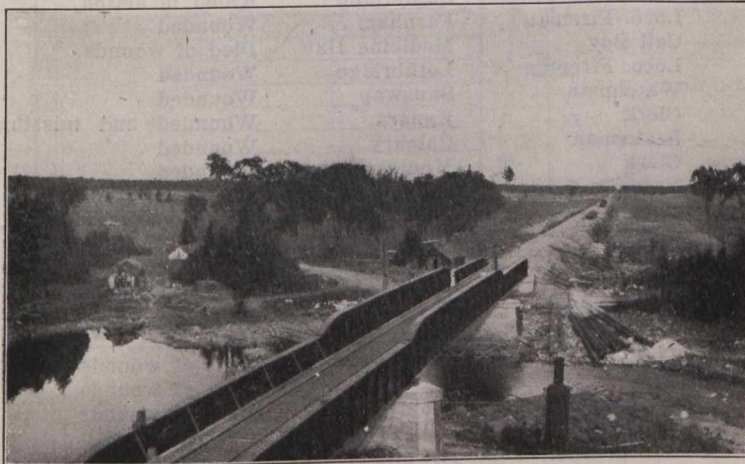
for driving rivets. This bridge was completed so that the construction trains crossed on July 16, 1914, and track laying was started to the Mississippi bridge and completed so as to allow erection of that bridge to start on Aug. 1, 1914.

A camp was established at this point and maintained until the erection work was

bridge was completed on Sept. 5, 1914, but a serious delay occurred after this. About the time the track was laid to Chats Rapids, the grader's locomotive upset in a sink hole, and a very difficult job of rescuing it was accomplished by calling in the Terry & Tench Co.'s erecting plant. The compressor was set up, and the pile driver used to



Chats Rapids Bridge, Ottawa River.

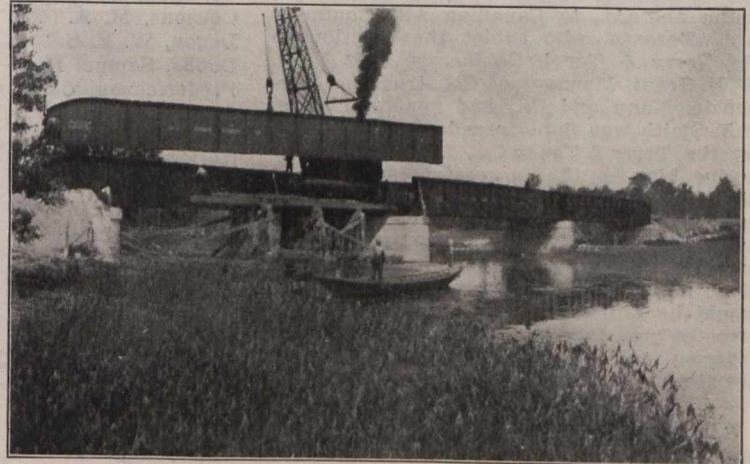


Mississippi River Bridge.

one 200 ft. through rivetted truss and one 290 ft. through rivetted truss spans. The total weight of the bridges is about 2,800 tons.

The masonry foundations were all in at the time the superstructure contractor's men arrived on the job on June 20, 1914. The plant arrived a day later and at the Carp River, driving piles and building falsework started at once. The easterly

started at Chats Rapids, at which point a splendid camp for use through the winter was built, and the men were made as comfortable as they could be at home. The river bed at the Mississippi is rock, so that a temporary timber bent trestle was erected, which permitted running out the girders on the cars, from which they were unloaded into place. The centre girders of the Mississippi River Bridge weighed 52 tons



Stoney Creek Bridge, Placing Last Girder.

build a trestle across the sink hole. Then the big locomotive crane was used to pick up the locomotive and set it on the track. This caused a delay of three weeks, and threw the erection of the Chats Rapids Bridge long into the late autumn and winter.

Work was finally started at Chats Rapids on Sept. 16, 1914, and a 25 ton guy derrick, having an 88 ft. mast and a 75 ft. boom, was erected alongside the track, about 200

yards from the first or easterly span, where a storage and sorting yard was established. The first span, 121 ft. deck girder, was erected after the temporary falsework was built, by using the same method as at Mississippi River. The next span was a 200 ft. through truss over deep water, running very swiftly, the bottom being rock with great boulders, making it very difficult to secure a safe footing for the piles. The piles used were 14 in. x 14 in. 50 to 60 ft. long, sawed British Columbia fir, with cast iron points. They were driven into the rock by the air hammer, sufficiently to get a good bearing. In addition to the deep water and swift current at this crossing, immense quantities of saw logs were constantly being floated down the river to mills at Hull, and other places, and it was necessary to keep watchmen day and night to protect falsework from destruction. On top of the falsework the bottom chords and floor systems of both the 200 and 290 ft. through spans were built, and the permanent track laid as the work advanced. From this track the trusses were erected by the use of the locomotive crane, the material being pushed in on cars by the railway locomotive from the sorting yard. The shop work on these trusses was such that on the 290 ft. span the end posts, which were erected last, did not even require a wedge to be driven in order to connect them to the top and bottom chords. As all of the girder spans in this bridge were of the deck type, without cover plates on the top chords, the greatest care had to be used in handling them. The work of erecting this bridge, which was 1,589 feet long, was completed on Jan. 16, 1915, the camp abandoned and the plant shipped away. The falsework and a large part of the erection equipment was shipped to Troy, N.Y., to be used in building the Congress St. Bridge, across the Hudson River.

The falsework timber used in the whole of the above work was British Columbia fir of the best quality, cut for the purpose. In addition about 200 piles were purchased locally. Throughout the whole work there was not a single serious accident, and the health of the men was splendid.

The contract for the fabrication and erection of the above work was let by Mackenzie, Mann and Co., to Canadian Allis-Chalmers Ltd., Toronto, who sublet the erection to the Terry & Tench Co. Inc. of New York. W. H. Grant, Manager of Construction, Mackenzie, Mann and Co., had general charge. C. T. Smith was Superintendent of the work for the Terry & Tench Co., and much credit is due him for the successful carrying out of the undertaking; Geo. Fisher was his assistant; Nicholas Dowd had charge of the locomotive crane. About 60 men were employed throughout the job, and were all hired locally. The contractors state that it would be difficult to get a better working force of men together. The weather in the summer was greatly in favor of the work, but storms in the winter caused some delay.

Concrete Ties.—A correspondent enquires as to the reasons why concrete ties have not been a practical success. One of the main troubles is the disintegration of the concrete caused by vibration and pounding under traffic. Some of them have cracked and fractured. The weight, the cost, and the necessity (in most cases) of special fastenings are other unfavorable factors. Some ties have given good service, however. Concrete ties of various designs have been proposed, and several of these have been tried in the track, but only in small numbers, so that the aggregate number of such ties is very limited.—Engineering News.

The Canadian Pacific Railway's Roll of Honor.

C. H. Buell, Staff Registrar and Secretary Pension Department, C.P.R., has issued two additional lists as given below, which are prefixed as follows:—

"Several thousand officers and employes of this company enlisted for active military duty with the Canadian Expeditionary Forces, and the majority of them are now in Europe, bravely battling for Canada and the Empire. As particulars of army reservists are not available, these lists of those who have given up their lives for their country, or been wounded in action, are necessarily incomplete, and do not therefore indicate fully the extent to which the company's officers and employes have participated in the great struggle."

List 5.

Abercrombie, J. D.	Clerk	Angus	Wounded
Ainslie, G. M.	Draughtsman	Winnipeg	Wounded
Bartlett, C. N.	Clerk	Montreal	Wounded
Bond, Wm. A.	Billor	Regina	Died
Bowman, Isaac	Constable	Montreal	Wounded
Burch, Arthur	Carpenter	Winnipeg	Died of wounds
Butler, H. B.	Bell Boy	Victoria	Killed in action
Caister, W. V.	Loco. Engineer	Brandon	Wounded
Chalmers, Wm.	Yard Foreman	Outremont	Wounded
Downey, Robt.	Car Cleaner	Glen Yard	Killed in action
Figsby, Wm.	Loco. Fireman	Kenora	Wounded
Gilbert, W.	Loco. Fireman	Regina	Wounded
Green, Sidney	Loco. Fireman	Brandon	Gas poisoning
Greenman, Fredk. M.	Painter	Moose Jaw	Wounded
Griffiths, Thos.	Constable	Montreal	Wounded
Hambridge, Geo. W.	Machinist	Angus	Killed in action
Hitchcock, Geo.	Clerk	Moose Jaw	Suffering from shock
Hobin, Wm.	Checker	Moose Jaw	Wounded
Irving, Robt.	Clerk	Montreal	Wounded and prisoner
Jones, David	Car Repairer	Moose Jaw	Wounded
McChristie, Harry	Loco. Fireman	Schrieber	Suffering from shock
Mackenzie, John	Scrapcutter	Angus	Suffering from shock
McNaughton, Donald	Watchman	Shepard	Wounded
McRae, Murdoch	Boilermaker	Angus	Wounded
Maslen, Walter	Wood Machinist	West Toronto	Wounded
Miller, John	Chief Clerk	Calgary	Suffering from shock
Parsisson, Harry	Storeman	Angus	Wounded
Pollock, Geo.	Clerk	Winnipeg	Wounded
Shiels, Robert	Brakeman	Medicine Hat	Wounded
Steuart, Alan J.	Laborer	Vancouver	Died of wounds
Taylor, Geo. H.	Loco. Fireman	Outremont	Wounded
Taylor, Walter	Checker	Saskatoon	Gas poisoning
Wallis, Jas. H.	Transitman	Brownville Jct.	Wounded
Williams, Hy. J.	Helper	West Toronto	Wounded

List 6.

Alexander, John	Accountant	Moose Jaw	Wounded
Blades, Roland	Clerk	Winnipeg	Wounded
Carnill, Wm.	Loco. Fireman	Lethbridge	Wounded
Cleeton, Alf. J.	Shed Foreman	Rossland	Wounded and prisoner
Corrigan, Thos. H.	Conductor	Sutherland	Killed in action
Cousens, M. A.	Loco. Fireman	Farnham	Wounded
Degon, W. F. G.	Call Boy	Medicine Hat	Died of wounds
Dobbs, Samuel H.	Loco. Fireman	Lethbridge	Wounded
Frederickson, Carl	Watchman	Shuswap	Wounded
George, Ernest F.	Clerk	Kenora	Wounded and missing
Goodwin, Geo. A.	Brakeman	Calgary	Wounded
Guthrie, A. C.	Clerk	Montreal	Wounded
Hayes, Geo.	Yardman	Medicine Hat	Wounded
Holmes, Geo. A.	Clerk	Victoria	Wounded
Hoyes, Nicholas	Car Cleaner	Winnipeg	Wounded
Jaffray, Wm.	Wiper	Medicine Hat	Killed in action
King, John D.	Constable	Montreal	Killed in action
Kinman, Geo. I.	News Agent	Calgary	Wounded
Legg, Wm. N.	Loco. Fireman	Revelstoke	Wounded
McLaughlin, Milton	Trainman	B. C. Division	Died of wounds
Mills, Samuel	Trucker	Winnipeg	Died of wounds
Molt, Chas. M.	Constable	Montreal	Died of wounds
Morgan, Lewis T.	Apprentice	Winnipeg	Gas poisoning
Phillips, Jas. F.	Car Cleaner	Winnipeg	Wounded
Pope, Chris. L.	Stakeman	Athalmer	Wounded and missing
Quinn, Patrick	Constable	Winnipeg	Believed killed
Rateliffe, Jos.	Helper	Angus	Wounded
Reid, Francis J.	Porter	Winnipeg	Killed in action
Ritchie, Geo. C.	Clerk	Montreal	Killed in action
Roughton, C. G.	Checker	Calgary	Wounded and missing
Smith, Ernest	Car Repairer	Winnipeg	Wounded
Swann, Walter H.	Clerk	Regina	Wounded and prisoner
Thorpe, M. H.	Constable	Montreal	Killed
Turner, Thos.	Wiper	Moose Jaw	Wounded
Weston, Chas. W.	Brakeman	Sutherland	Wounded
Young, Claudius	Loco. Fireman	Lethbridge	Died of wounds

New Type of Enlarged Filling Hole for Locomotive Tender Tanks.

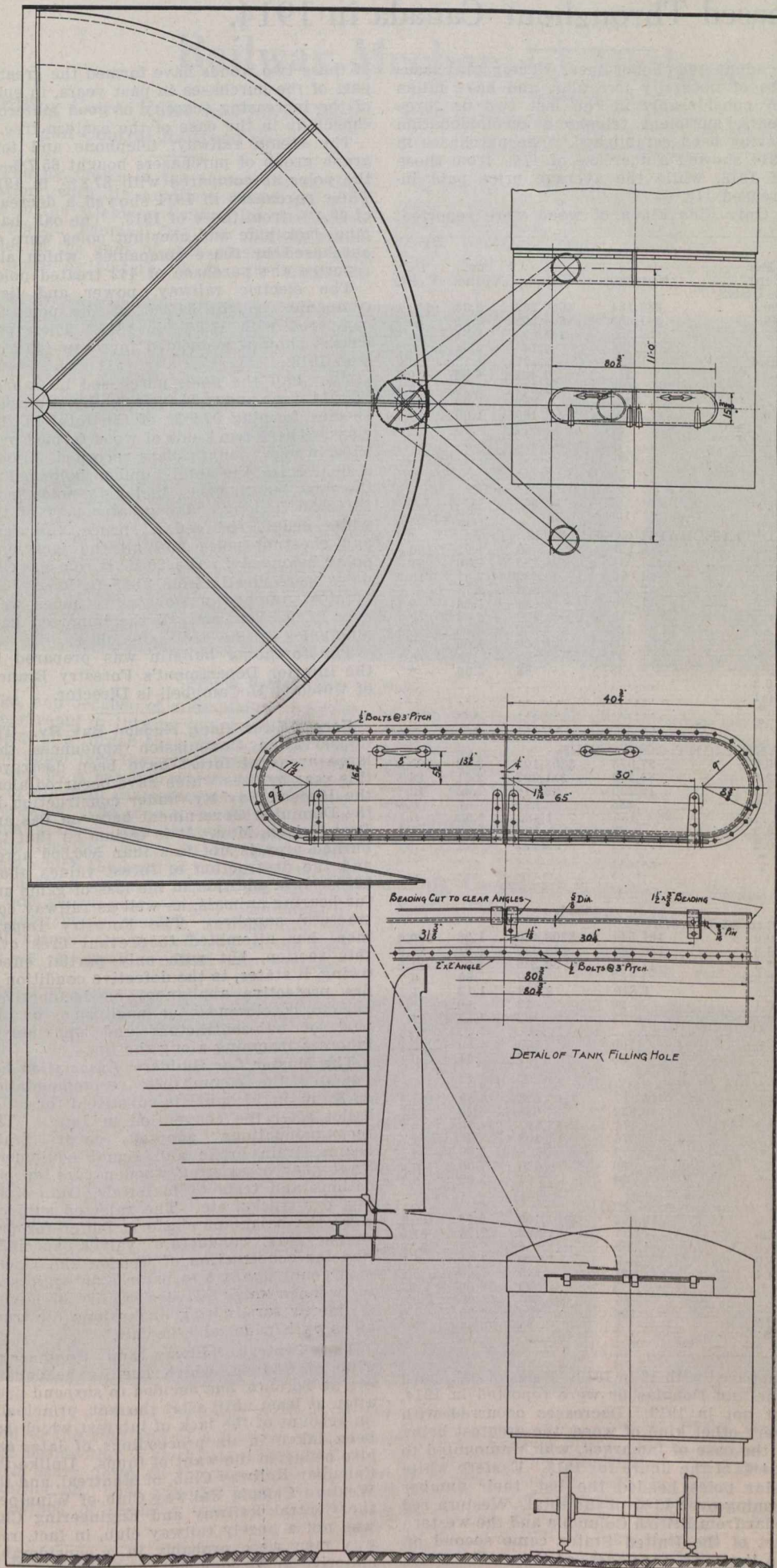
Among other notable features of interest incorporated in the design of the 15 heavy consolidation type locomotives built for the Canadian Government Railways recently, is the enlarged type of filling hole applied to the tender tank, which is shown in the accompanying illustration. It is seldom, if ever, possible to stop heavy freight trains within a predetermined area less than \pm ft. over or under that desired. The cause for this is apparent, and the ruling factor is invariably that known as "slack action," that is, the movement allowed by reason of the compression of draft rigging which in a 60 car train often exceeds 15 ft. This tends to gather at one end or the other and the recoil forces the train beyond any refined movement that may be desired.

Realizing conditions as above stated, it has been the practice on many roads to disconnect the locomotive from the train when taking water, as the manhole of the usual size only allows for a maximum length of travel for the standpipe or tank spout of 6 ft., or 3 ft., each way. By examining the accompanying illustration, it will be noted that a travel of 11 ft. is easily obtained from any usual design of standpipe or water tank spout. Furthermore these conditions are applicable to both sides of the tank and the design is such that it can be applied to any style of tank, large or small.

The construction details do not vary from those usually experienced, except that the cover is made in two sections of $\frac{1}{2}$ in. steel plate resting directly on top of the $\frac{3}{8}$ in. filling hole wrapper sheet, which is stiffened by a $1\frac{1}{2}$ x $\frac{3}{8}$ in. steel beading as shown, the latter being cut to clear the $2\frac{1}{4}$ x $2\frac{1}{4}$ in. hinge angles. The wrapper sheet extends 8 ins. above the water space top plate of tank and is formed with rounded ends so as to give a maximum inside opening $15\frac{3}{8}$ ins. wide by $80\frac{3}{8}$ ins. long. For this data we are indebted to A. W. Wheatley, Vice President & General Manager, Canadian Locomotive Co., the builders of the locomotives referred to above.

American Railway Master Mechanics' Association.—Following on the association's convention in June, 54 subjects were submitted to the members for letter ballot, and of this number one subject only has been rejected, viz., the recommendation that the locomotiveman's torch be made of steel tubing. Recommendations accepted covered the specification for steel axles, fire box steel, forging, cylinder castings and steel castings; inspection and testing of locomotive boilers; operation of brakes on locomotives and tenders handled dead in trains and offered in interchange; photometering headlights, rules for determining stresses in longitudinal barrel seams and patches, gusset braces and flat surfaces, and staybolts, radial stays, crown bar bolts, etc.; tinware; fuel economy; forging specifications, and boiler washing.

The Churchill Basin Fish and Traction Co., which is a joint stock company registered in Saskatchewan, has been granted a license by the Dominion Government, to occupy for one year a strip of land 40 ft. wide from Big River to the Great Sandbar on the Beaver River, from the latter place to Ile a la Crosse, 125 miles; and from the Great Sandbar to Lac la Rouge, 100 miles. The license is renewable from year to year, and "generally use the said strips of land and the company may make roads thereon, for the ordinary purposes of a common carrier."

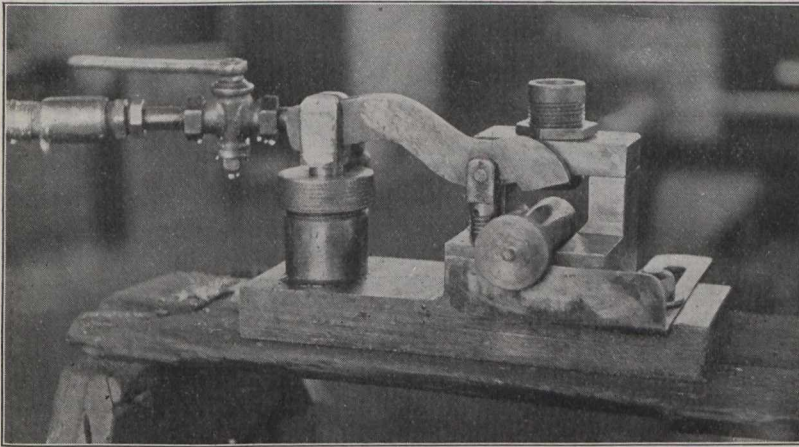


Enlarged Filling Hole for Tender Tanks.

Railway Mechanical Methods and Devices.

Drilling Cotter Holes in Pins at Michigan Central Railroad Shops.

The jig shown in the accompanying illustration, with its auxiliary bushings, is in use in the Michigan Central Rd. locomotive shops, St. Thomas, Ont., for drilling cotter holes in the ends of such pins as are held in place by cotters. It is very simple in

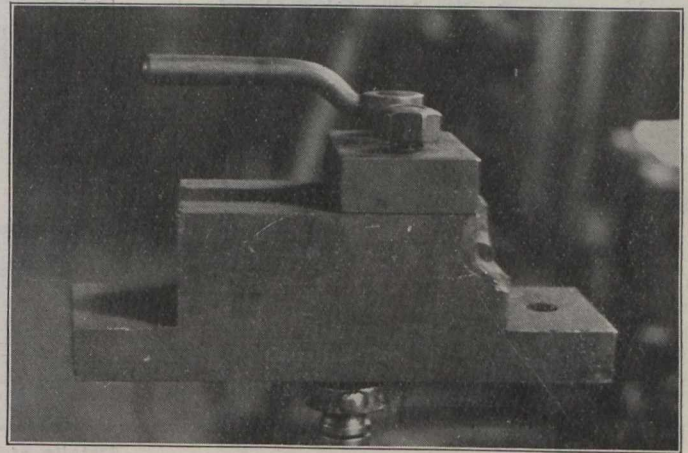


Drilling Cotter Holes in Pins.

design, and because of a simplicity of action is very rapid in turning out work. The jig consists of a forged base, machined all over. In the upper face there is a V block, bridged over top by a bar into which drill jig bushings of different diameters as required may be screwed. The pins to be drilled are set in this V block, and located longitudinally by the locating gauge in the foreground, against which the head of the pin is bearing. This locating gauge is held to the jig base by a bolt shown on the right, adjustment of the gauge being possible through the slot in the gauge. On the left end of the base there is a small vertical air cylinder,

Milling Slots in Crown Stays in Grand Trunk Railway Shops.

A simple jig for milling slots in crown stays is shown in the accompanying illustration, which shows the jig used in the G.T.R. shops, Stratford, Ont. It consists of a simple forged base, which can be bolted to the milling machine table. The upper face



Jig for Holding Crown Stays for Slotting.

of the base is grooved to receive the crown stays to be slotted, straddling which there is a holding on strip, secured by two nuts, one of which is plain, and the other a handle nut, the plain nut being run on by hand, the final tightening being by hand. The milling cutter is run on the head of the stay from the right.

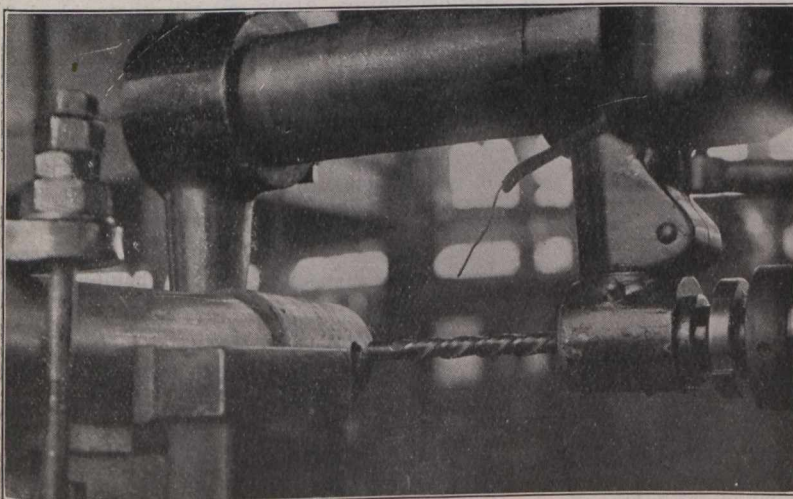
Cutting Crosshead Keyways in Piston Rods at Michigan Central Rd. Shops.

The method followed in the M.C.R. locomotive shops, St. Thomas, Ont., for cutting nut on the reverse side. The principal

of the keyway is placed in the milling machine spindle and the work lined up. The table with rod is run across so that the cutter projects through the drilled hole on the far side, where the cutter is supported by the milling arm. The feed of the machine carries the rod along the desired length of the keyway, forming it complete in one pass. The entire time for milling the keyway, including the setting up, is under 12 mins.

Heavy Boring Bar Head at Grand Trunk Railway Shops.

A heavy boring bar head which has a quick adjustment of the cutting tools is in use in the G.T.R. shops, Stratford, Ont. A front and side view of the head is shown in the accompanying illustration. In general appearance it resembles the usual boring bar head, consisting of a cast iron ring, with three projecting arms, slotted radially to receive the tools. These tools are held in place by a square ended eye bolt, with a

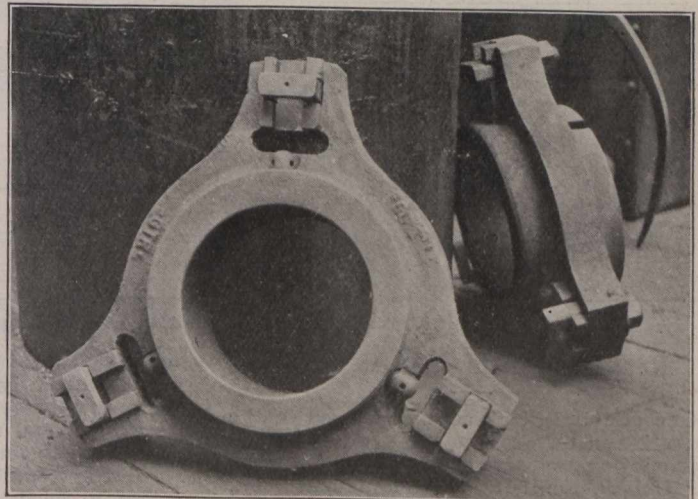


Cutting Crosshead Keyways in Piston Rods.

attached to the rear end of a fulcrum arm, pivoted beside the V block, the short arm of which bears down on the pin when the air is turned on. This provides a quick and ready method of securing the work while drilling.

Pere Marquette Rd.—The date on which the sale of this railway is to take place has been postponed to Dec. 6.

crosshead keyways in piston rods, is shown in the accompanying illustration. In the rod as it comes turned from the lathe, a drill hole is made through the crosshead end, at the end of where the keyway is to be located. The rod is then mounted in the vise on a milling machine table, and clamped down, with the drilled hole parallel to the table. A spiral milling cutter of diameter exactly the same as the thickness



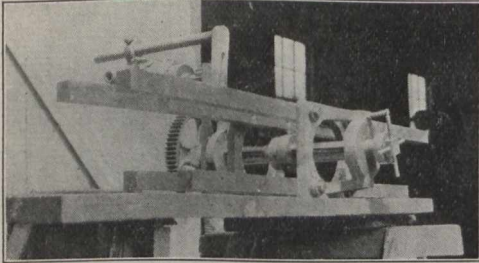
Heavy Boring Bar Head with Tool Adjustment.

point of value in the head is the tool adjustment feature, which consists of a small radial screw bearing up under the base of each tool. Each of these adjustment screws has 4 radial holes for turning pins, by means of which the screw may be turned, forcing the tool out to its required cutting position. This head is used on the heavy boring bar of the horizontal boring mill, wherein the work is carried along on the

table, the bar having no longitudinal motion. It might equally well be adapted to the movable head such as is commonly used on the lathe.

Portable Cylinder Boring Machine.

W. S. Bazore, Master Mechanic, Rapid Transit Subway Construction Co., New York, has favored Canadian Railway and Marine World with the accompanying illustration of a cylinder boring machine, or what is

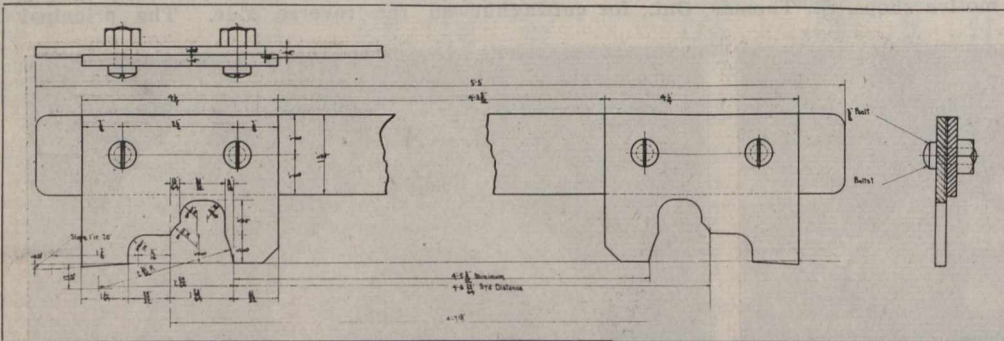


Portable Cylinder Boring Machine.

known as a boring bar, for use in the field. The photograph practically explains itself. For the motive power, Mr. Bazore used a small air boring machine by placing a small gear on the piston of the air drill.

Wheel Mounting and Checking Gauge for Canadian Northern Railway.

The standard M.C.B. wheel mounting and checking gauge illustrated herewith has been developed by the Canadian Northern Ry. mechanical department for use in its shops, to replace the one piece gauges commonly used. It consists of a cross bar to which contour gauges are secured by $\frac{3}{8}$ in. bolts, which makes it much easier to manufacture and replace if anything happens to one end of the gauge. The end pieces are milled out in batches, and are readily attached to the bar. It is being supplied to all the shops on the system.

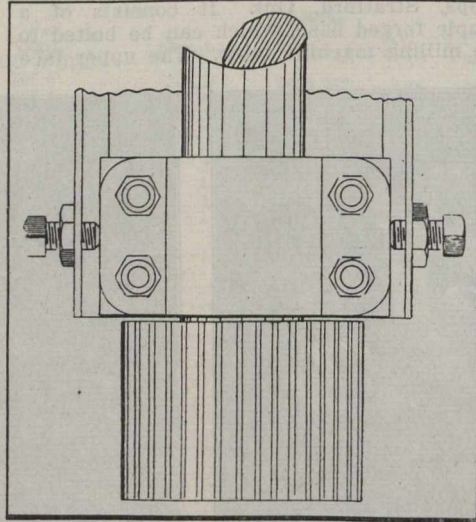


M.C.B. Wheel Mounting and Checking Gauge.

Repairs on Bridge Bearing Box.

One of the difficulties encountered in the operation of drawbridge no. 6, at Sault Ste. Marie, Mich., supervised and maintained by the Duluth, South Shore and Atlantic Ry., was in the rapid wear of the bolts on the main driving pinion bearing box. The bridge was constructed in 1884, and to say the least, bridge designing has been considerably improved since that date. As shown in the accompanying illustration, the bearing-cap and the brass were held in position by the use of 4 1 in. bolts. The shafting being $3\frac{3}{8}$ ins. diam., bolts of 1 in. diam. were repeatedly found to be too light for the service. The trouble has been remedied by reborring the bolt holes to suit $1\frac{1}{4}$ in.

bolts, the bearing casting being sufficiently large to admit of the increase in the size of the holes. Two holes were also drilled and tapped in the angle-plate at each end of the bearing for 1 in. set screws, to aid in preventing any side motion of the bearing. The work was done before the opening of navigation this year, and during the period that has elapsed since that time no trouble has been experienced with the bearing, and will not likely be for a long period of time.



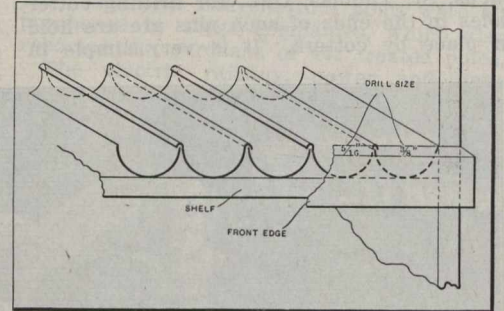
Details of Bridge Bearing Box.

—J. G. Hoppell, Electrical Superintendent of Bridges, Canadian Pacific Ry., Sault Ste. Marie, in Railway and Locomotive Engineering.

Drill Holder.

A holder for drills and similar tools must meet the following conditions in order to be satisfactory: First, it must be easy to inspect all of the drills if several are held in the same compartment. Second, it must be easy to pick out either one or all of the drills held in a given compartment. Third,

eral rows of holders can be used, or a single row of holders may be placed on a narrow shelf, according to the requirements of different toolrooms. In connection with the accompanying illustration, it should be observed that the length of the holder does not necessarily have to be equal to the length of the drills. The holders are made of tinned sheet metal and each alternate section has turned over edges which are bent up tight over the edges of the inter-



Drill Holder made of Tinned Sheet Metal.

mediate sections. The joints can be soldered if it is desired to make a smoother or more permanent connection than it is possible to obtain by simply tightening the joint in a vise. The holders are fastened to the shelf by means of nails in the bottoms of the sections, one nail to a section being sufficient. A convenient method of forming the sections is to bend them over a piece of iron pipe of suitable size, if a machine for this purpose is not available.—R. S. Forstedt, in Machinery, New York.

The Great Services of Railway Engineers.

Chas. D. Marx, in his presidential address at the American Society of Civil Engineers' annual meeting in San Francisco recently, said: "In railway engineering, think you that the men who through virgin forests and sandy deserts, through miasmatic swamps and rocky canyon, across rivers and over mountains, carried the steel bands that now tie mankind so closely together—think you that these men were engaged in an occupation likely to kill their ideals? When the final balance is struck, I warrant that the debit will not be on the side of this grand army of peace of the present, as compared with the armies of war of the past and present, for deeds of ideal heroism, self-sacrifice and devotion to duty. It seems like carrying coals to Newcastle to speak in an audience like this of what the railways have done for all countries—for our own country especially, and more particularly for the Pacific slope. It was not so long ago when I read of the beginning of construction of the Trans-Siberian Railway which now unites the Atlantic and the Pacific on the other continent. The Cape to Cairo Railway, too, has passed through the stages of its preliminary surveys and partial construction. What centuries of fighting could not accomplish these two roads will in time accomplish. The light of civilization will be spread on the Dark Continent. Who then is destructive of idealism? The man whose works are a means, if but a humble one, of bringing his fellow beings into a direct contact with the wonders of creation, or he who, enveloped in the mantle of exclusiveness, bemoans this defiling contact?"

C.P.R. Employees in Winnipeg have a Social Club with over 900 members. A proposition is under consideration for the erection before the winter season of 1916-17 of a permanent club building.

Passenger Car Steps, Canadian Pacific and Grand Trunk Railways.

Both the C. P. R. and G. T. R. have designed for their new equipment, new passenger car steps, that embody some features of special interest, particularly as showing the advent of steel for all classes of work, to replace wooden construction, and also, in one case, an attempt to make a step that is more convenient for passengers entering and leaving the car.

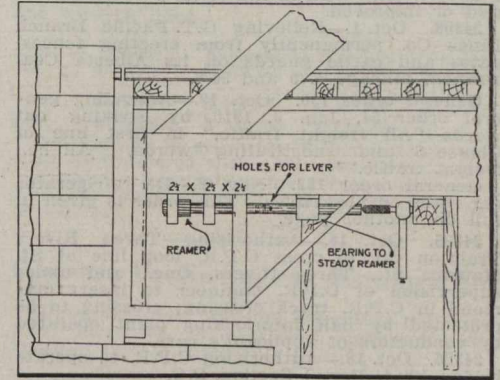
C. P. R. Steps.—The new all steel steps of the C. P. R. were developed recently, and are illustrated herewith. They are being

the upper one of which is secured to the under side of the step above. The steps are of 1 1/8 in. wood, 9 5-16 ins. deep, carried on 1 1/2 by 1 1/2 by 3-16 in. angle clips 7 ins. long, rivetted by 1/4 in. rivets to the end pieces, and on the top flange of the risers. To the angles, the steps are secured by 1/4 in. carriage bolts, and to the risers by no. 10 screws. The front edge of the step is protected by a half section of 1 in. pipe, secured to the wood by no. 10 screws. The tread surface of the step is a piece of 5-16 in.

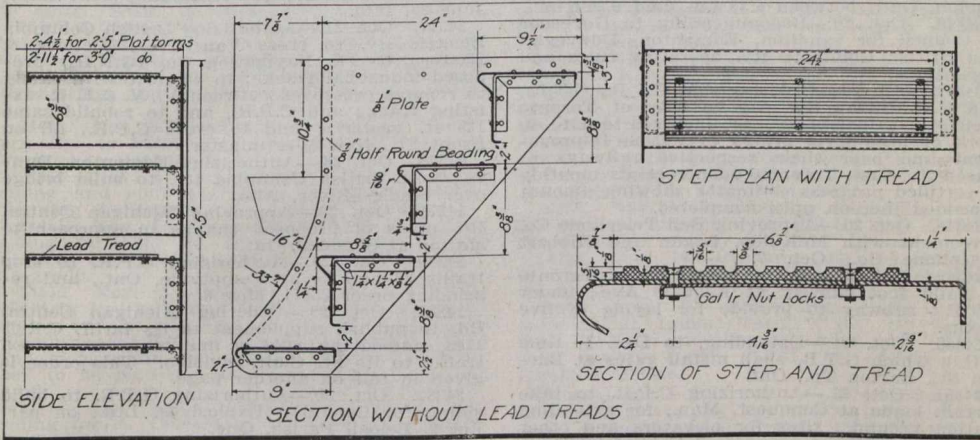
Bridge Repairs on Canadian Pacific Railway.

In draw bridges which are in service since 1887 the end jacks and the jack pins are practically worn out and the pin seats are worn oval about 1/4 in. The new pins were made 1/4 in. larger in diameter and a suitable reamer was secured to ream out the pin holes, to take the new pins.

The accompanying illustration shows the arrangement whereby the reaming was done. The reamer was fitted on a mandrel



of suitable length and suitable cast iron bearings were provided to steady the mandrel, and three equidistant radial holes were drilled to turn the mandrel with a bar, and a ratchet was inserted on the other end to feed the reamer. The holes to be reamed were 3 x 2 1/2 ins., and 4 holes in all, which were done by 3 men in 3 days' time. Two men were working on the reamer and the third man was watching

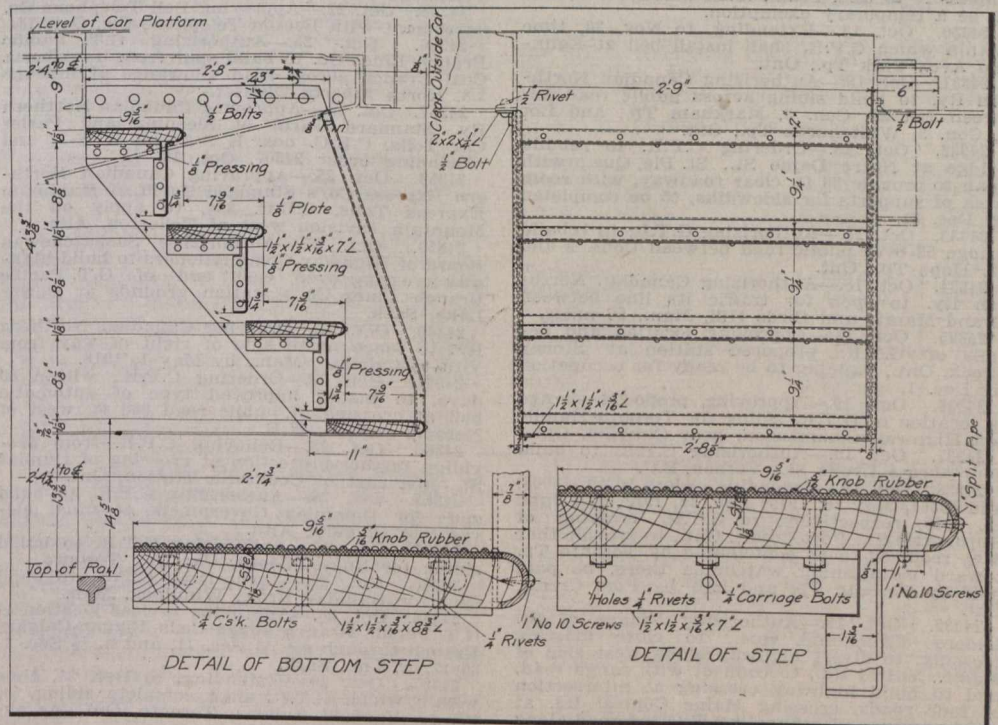


Standard Four Tread Car Steps, Canadian Pacific Railway.

used on both the new steel and wooden passenger equipment. Two side plates of 1/8 in. sheet steel are protected along the outer edge by a band of 7/8 in. half round beading from top to bottom. The step and riser is made in one piece of 1/8 in. plate, flanged at both edges, and rounded with a 9-16 in. radius on the front edge of the step. This formed step is secured to the side members by a bent 1 1/4 by 1 1/4 by 1/8 in. angle at each end. These angles are spot welded to both step, riser and end pieces, in place of the former practice of rivetting. The steps are 2 3/4 ft. wide, 7 3/8 ins. deep in the clear, and with a rise of 8 3/8 ins. The treads are lead plates, 24 1/2 by 6 7/8 ins., and 5-16 in. thick, grooved on the surface, and secured to the step by 6 countersunk 1/4 in. bolts, the nuts of which are locked under the step by 2 bolt nut locks.

knob rubber. Each step is 2 ft. 8 1/8 ins. wide, with a tread depth in the clear of 7 9-16 ins., with a rise at each step of 9 1/4 ins. The steps are secured to the car body by 2 by 2 by 1/4 in. angles and 1/2 in. bolts.

G. T. R. Steps.—The new steel frame step in use on the G. T. R., which is illustrated herewith, has been made standard on the system. The special point about it, apart from its all steel frame construction, is the fact that the usual 3 treads have been replaced by a 4 tread arrangement, making unnecessary the use of the stepping boxes on entering and leaving the car. The standard step formerly in use on the G. T. R. was the same as that in use on standard sleeping cars, which also use the stepping box; but the latter has been found to be dangerous, owing to its small size and the distance from the lower step to it, the passengers sometimes stepping on the box edge, causing it to turn over, frequently resulting in injury. With this four tread arrangement, it is now possible to step from the platform to the lower tread without difficulty, as it is only 14 1/8 ins. from the rail level to the lower step.



Standard Four Tread Passenger Car Steps, Grand Trunk Railway.

The construction is simple. The sides consist of two 1/8 in. plates, the outer edges of which are protected with a slit pipe, 7/8 in. diam., fitting over the plate edge. The risers of the steps are of similar stock to the end pieces, 1/8 in. pressed sheet steel, with end flanges for rivetting to the end pieces, and with top and bottom flanges,

The American Society of Mechanical Engineers' annual meeting will be held at New York, Dec. 8 to 10. The railway meeting will take place on Dec. 8, when papers will be presented dealing with the operation of parallel and radial axles of a locomotive by a set of single cylinders, and with four-wheel trucks for passenger cars, and possibly one on six-wheel trucks for passenger cars.

for trains, and when they were in sight he signaled and the reamers were taken out of the cut, because there was severe rattling when the train was going over the bridge which might have broken the reamer. The average number of trains was one an hour. J. G. Koppell, Electrical Superintendent of Bridges, Canadian Pacific Ry., Sault Ste. Marie, Ont., in Railway and Locomotive Engineering.

24400. Nov. 4.—Dismissing complaint of A. H. Mayland, Calgary, Alta., against extra freight charged by C.P.R. on hogs to Moose Jaw, Sask.

24401. Nov. 5.—Relieving Canadian Northern Ry. from speed restriction of 15 miles an hour over its line from Blaine Lake to Denholm, Sask.

24402. Nov. 4.—Extending for 30 days from date time within which Toronto, Hamilton & Buffalo Ry. may re-arrange bents of timber trestle over Hamilton Radial Ry. at Sherman Inlet, Hamilton, Ont.

24403. Nov. 5.—Authorizing Vancouver, Victoria & Eastern Ry. & Navigation Co. (G.N.R.), to cross Second and Third Sts., Tulameen, B.C., at grade, and build passing track, in addition to other lines; to open up lane 40 ft. wide through Block 2, east of Lots 9 and 14, and lane 20 ft. wide through Block 9, east of Lots 3 and 8.

24404, 24405. Nov. 5.—Authorizing Canadian Northern Ry. to open for traffic its line from Bienfait to Estevan, 9 miles, and from Elrose to Eston, Sask., 35 miles.

24406 to 24408. Nov. 5.—Approving agreements between Bell Telephone Co. with Lanark & Carleton Counties Telephone Co., Oct. 29th; Rural Telephone Co. of Kitley, Sept. 30, and Bracebridge and Muskoka Lakes Telephone Co., Oct. 22.

24409. Nov. 5.—Authorizing Canadian Northern Ry. to build spur for Canadian Oil Co., Portage la Prairie, Man.

24410. Nov. 5.—Authorizing G.T.R. to build siding and spur therefrom for Maganetawan Tanning & Electric Co., Armour Tp., Ont.

24411. Nov. 5.—Authorizing C.P.R. to build siding for City of Toronto, crossing Mount Stephen St., and roadway east side River Don, at grade.

24412. Nov. 8.—Ordering British Columbia Electric Ry. to install improved type of automatic bell at crossing of Twelfth St., New Westminster, B.C., within 60 days from date, and to maintain bell; 20% of cost of installing bell to be paid out of railway grade crossing fund.

24413. Nov. 8.—Authorizing C.P.R. to build siding for A. Carriere at mileage 71.2, Quebec Subdivision.

24414. Nov. 8.—Authorizing City of Regina, Sask., to connect Regina Municipal Ry. with C. P.R. at intersection of Arcola Ave. and Atkinson St.

24415. Nov. 8.—Approving G.T.R. plan showing interchange tracks proposed to be built at Arnprior, Ont., between G.T.R. and C.P.R.; semaphore to be erected west of C.P.R. switch, at point indicated by C.P.R., at G.T.R. expense, and authorizing building of these tracks across certain streets, in Arnprior.

24416. Nov. 5.—Authorizing Canadian Northern Ontario Ry. to build interchange track for allowing transfer of cars to G.T.R. and vice versa, near Ottawa, Ont.

24417. Nov. 9.—Authorizing Lake Erie & Northern Ry. to erect trolley wire and transmission cable over G.T.R. at mileage 44.3, Woodhouse Tp., Ont.

24418. Nov. 8.—Ordering G.T.R. to divert Kingston Road, the cost of work to be paid, 20% out of railway grade crossing fund, not exceeding \$5,000; \$500 each by Brighton and Murray Tps.; and remainder by G.T.R.; and rescinding order 18447, Dec. 30, 1912.

24419. Nov. 6.—Relieving Canadian Northern Ry. from speed restriction of 25 miles an hour on its line between Saskatoon and Harris, Sask., mileage 0 to 49.4.

24420. Nov. 9.—Authorizing Saskatchewan Board Highway Commissioners to build highway over Canadian Northern Ry. in s.e. 1/4 Sec. 34-33-11, w.2.m.

24421. Nov. 5.—Ordering that clause 2 of order 23187, Jan. 18, be struck out, and approving plans of proposed track connection and station facilities at Royston, B.C., for Esquimalt & Nanaimo Ry., and Canadian Collieries, Ltd.

24422. Nov. 8.—Rescinding order 19788, July 10, 1913, authorizing construction, maintenance and operation of spur for Silcate Brick Co., Ottawa, and authorizing G.T.R. to remove it and to discontinue its operation.

24423. Nov. 10.—Recommending to the Governor in Council for sanction, St. Lawrence & Adirondack Ry. lease to New York Central Rd., Sept. 27.

24424. Nov. 10.—Authorizing Waldeck rural municipality, Sask., to build overhead bridge over C.P.R. at road between Secs. 29 and 30-16-11, w.3.m., to be completed by Dec. 31.

24425. Nov. 10.—Relieving G.T.R. from providing further protection at Springhill crossing, King, Ont.

24426. Nov. 10.—Amending order 24142, Sept. 2, re C.P.R. location from Stony Creek to Rogers Pass Tunnel, B.C.

24427. Nov. 10.—Amending order 24392, Nov. 3, re G.T.R. additional crossing of Ahrens St., Berlin, Ont.

24428. Nov. 10.—Approving Central Canada Express Co.'s Standard Mileage Tariff of Maximum Tolls, C.R.C. 1.

24429. Nov. 10.—Approving Central Canada Express Co.'s bylaw, authorizing Peter McArthur to prepare and issue all tariffs of tolls for carriage of express.

24430. Nov. 11.—Authorizing British Columbia Public Works Department to build level high-

way over Grand Trunk Pacific Ry. at mileage 88, close to mouth of Zimacord River.

24431. Nov. 10.—Ordering C.P.R. forthwith to floor pens leading to loading chutes, as well as large pen at rear of yard, at Provost, Alta., with old ties covered with cinders.

24432. Nov. 11.—Authorizing C.P.R. to build spur for Borden Condensed Milk Co., Ingersoll, Ont.

24433. Nov. 11.—Relieving Canadian Northern Ry. and C.P.R. from maintaining night signalman to operate interlocking plant in N. W. 1/4 Sec. 13-2-8, w.2.m., Sask.

24434. Nov. 12.—Removing speed restriction of 15 miles an hour over Canadian Northern Ry. from mileage 30 to Gravelburg, Sask.

24435. Nov. 10.—Dismissing application of City of Ottawa, Ont., for authority to build double line of 51 in. steel water pipe under C. P.R. Broad St. yard.

24436. Nov. 11.—Authorizing C.P.R. to file tariff to provide for charging of special tolls for detention of cars containing western grain and grain products at Cartier, Ont., for more than 72 hours. This order is given in full on another page.

24437. Nov. 13.—Ordering C.P.R., G.T.R., Canadian Northern Ontario Ry. and Toronto Ry. to pay to City of Toronto their proportions of expense incurred to date on high level bridge over Don improvement and over their respective railways at Queen St. East, upon receipt of monthly certified progress estimate showing amount expended thereon until completed, and rescinding order 24347, Oct. 20.

24438. Nov. 9.—Authorizing Canadian Northern Ry. to connect with C.P.R. near Current River and at Arthur St., Port Arthur.

24439. Nov. 13.—Recommending to Governor in Council for sanction, Ottawa & New York Ry. lease to New York Central Rd., Sept. 27.

24440. Nov. 16.—Suspending, until further order C.P.R. Import Tariff, C.R.C. no. E-3060, from St. John and West St. John, N.B., and G. T.R. Import Tariff, C.R.C. no. E-3280, from Portland, Maine.

General order 153, Nov. 4.—Prescribing certain rules governing any future proposed new issue of the Canadian Freight Classification, or any proposed supplement to issue then current. This order is given in full on another page.

General order 154, Nov. 10.—Ordering that, pending revision of present Canadian Freight Classification, railway companies subject to Board's jurisdiction publish and file commodity tariffs, to apply between all points in Canada, covering cream or milk aerators, agitators, coolers, forewarmers, heaters, pasteurizers, separate or combined, loose or in skids. This order is given in full on another page.

General order 155, Nov. 15.—Ordering that railway companies publish and file amended tariffs showing toll not exceeding 75c for cleaning and disinfecting, or disinfecting any car in which live stock has been carried when work is done by companies. This order is given in full on another page.

Progress of Rogers Pass Tunnel Construction, Canadian Pacific Railway.

The following table, for which we are indebted to J. G. Sullivan, M.Can.Soc.C.E., Chief Engineer, C.P.R., Winnipeg, shows the progress made from Sept. 30 to Oct. 28, also the total progress to Oct. 28:—

	Progress.	Total.
EAST END.		
Main heading	1,049 ft.	10,429 ft.
Main tunnel	669 ft.	7,247 ft.
WEST END.		
Main heading	1,109 ft.	11,129 ft.
Main tunnel	699 ft.	6,110 ft.

Gross Operating Revenues for August on the large steam railways of the United States, according to the Bureau of Railway Economics, were \$1,191 a mile, an increase of 17, or 1.3%, compared with Aug., 1914. Operating expenses were \$765, a decrease of \$23, or 3%. Net operating revenue, therefore, was \$426—an increase of \$40, or 10.2%, and operating income was \$375—an increase of \$39, or 11.4%. The gain was, however, to a large extent confined to the eastern and southern districts, the western gaining only 3.9% a mile. The operating ratio for the whole country was 64.2%, compared with 67.1% in Aug., 1914, and 68.8% in Aug., 1913. Considering the three main districts, the respective ratios for Aug., 1915, and Aug., 1914, were as follows:—Eastern, 63.6 and 67.3; southern, 67.6 and 74.1; western, 63.1 and 64.5.

Intercolonial Ry. employees have decided to donate a day's pay out of their November pay cheques to the Canadian Patriotic Fund.

Canadian Northern Railway Earnings, Etc.

Gross earnings, working expenses, net earnings, increases, or decreases, for Western Lines, compared with those of 1914-15, from July 1, 1915:

	Gross Earnings	Expenses	Net Earnings	Increase or Decrease
July	\$1,206,100	\$951,000	\$255,100	x\$145,400
Aug.	1,192,800	954,000	238,800	x5,900
Sept.	2,014,600	1,358,000	661,600	1,900
	\$4,413,600	\$3,227,000	\$1,186,600	x\$79,800
Decr.	\$ 658,300	\$ 579,000	\$ 79,300	.....

Mileage in operation at Sept. 30, 1915, 4,965, against 4,670 at Sept. 30, 1914.

Commencing with October, the figures show the earnings of the entire system, both eastern and western lines.

	Gross Earnings	Expenses	Net Earnings	Increase
Oct.	\$3,673,500	\$2,421,500	\$1,257,000	\$ 537,800
	\$3,673,500	\$2,421,500	\$1,257,000	\$ 537,800
Incr.	\$1,100,200	\$ 562,400	\$ 537,800	.....

The mileage in operation during October, was 7,280, as compared with 6,886 miles in Oct., 1914. Approximate earnings for three weeks ended Nov. 21, \$2,396,200 against \$1,571,000 for same period 1914.

Canadian Pacific Railway Earnings, Etc.

Gross earnings, working expenses, net earnings, increases, or decreases, compared with those of 1914-15, from July 1, 1915:

	Gross Earnings	Expenses	Net Earnings	Increase or Decrease
July	\$7,805,375.47	\$5,094,972.35	\$2,800,403.12	x\$978,042.71
Aug.	8,801,451.52	5,359,136.80	3,442,314.72	70,157.02
Sept.	1,273,165.45	5,527,864.81	4,475,308.64	878,252.25
	\$26,960,992.44	\$15,981,973.96	\$10,988,018.48	x\$20,633.44
Dec.	\$4,188,883.33	\$3,663,249.89	\$520,633.44	.....

Approximate earnings for October, \$13,311,000, against \$9,152,000 for October, 1914, and for three weeks ended Nov. 21, \$9,010,000, against \$5,515,000 for same period, 1914.

Grand Trunk Railway Earnings, Etc.

The following figures show the earnings for the G.T.R. (including the Canada Atlantic Ry.), the G.T.W.R. and the D.G.H. & M.R. for September, compared with those for September, 1914:

Grand Trunk Railway.	1915.	1914.
Earnings	\$3,667,800	\$3,838,250
Expenses	2,501,100	2,858,900
Net earnings	\$1,176,700	\$ 979,350

Grand Trunk Western Railway.	1915.	1914.
Earnings	\$ 669,900	\$ 611,450
Expenses	445,200	553,450
Net earnings	\$ 224,700	\$ 58,000

Detroit, Grand Haven and Milwaukee Ry.	1915.	1914.
Earnings	\$ 257,300	\$ 221,800
Expenses	192,150	233,750
Net earnings	\$ 65,150	\$ 11,850

Approximate earnings for October, \$4,666,591, against \$4,404,417 for Oct., 1914; and for three weeks ended Nov. 21, \$2,894,364, against \$2,609,224 for same period 1914.

TRAFFIC RECEIPTS OF THE SYSTEM.

Aggregate from Jan. 1 to Oct. 31:—	1915	1914	Incr.	Decr.
G.T.R.	\$33,045,502	\$35,540,802	.....	\$2,495,300
G.T.W.R.	6,241,221	5,998,997	\$242,224	.....
D.G.H.&M.R. .	2,272,020	2,107,531	164,489	.....
Totals.....	\$41,558,743	\$43,647,330	.....	2,088,587

Grand Trunk Pacific Railway Earnings.

The approximate earnings of the Prairie Section, 916 miles, for October were \$973,582, against \$454,469 for Oct., 1914. The aggregate earnings for four months ended Oct. 31 were \$1,858,558, against \$1,667,542 for same period, 1914.

The Glacier House, Glacier, B.C., which is operated by the Canadian Pacific Ry., closed Nov. 14 for the winter. The Mount Stephen House, Field, B.C., remains open all the year round.

Board of Railway Commissioners' Judgment on Baggage Rules.

Commissioner McLean, of the Board of Railway Commissioners, gave a decision recently on the proposed rules governing baggage car traffic in Canada, in which he pointed out that what was before the board was the question of the rules, not of rates, carried in baggage tariffs. Following is a summary of the judgment, which was concurred in by Sir Henry L. Drayton, Chief Commissioner; D'Arcy Scott, Assistant Chief Commissioner, and Commissioner Goodeve:

By order 195 of Oct. 17, 1904, wherein approval was given to various forms and regulations used by railway companies, included in which were the rules and regulations for the carriage of baggage. Questions having arisen as to the scope of certain of the rules the whole matter was taken up by the board. The railway companies prepared a revised form of the regulations, which were considered by boards of trade, commercial travellers' associations and other interested bodies throughout Canada, with the result that various amendments were agreed to. The regulations thus revised, and the information collected were then considered at informal conferences with the Board's officers, with the result that agreements were made on a number of matters, and incorporated in a revised proof. The unagreed upon matters were argued before the Board and the present judgment gives the Board's decision. The

matters involved are six in number, and are:

1. Sample Baggage. Rule 2, sub sec e. This deals with the question of pentagonal and other irregular shaped sample cases used by commercial travellers. The judgment points out that uniformity of rule, owing to the traffic back and forth between Canada and the United States is desirable, and therefore orders that the Trunk Line rule now adopted and in force in the United States, with the approval of the Interstate Commerce Commission, shall be adopted for Canada. This rule reads: "Trunks or other rigid containers with more than two bulging sides, or with two bulging sides that are not opposite each other, will not be accepted for transportation in regular baggage cars."

2. Canoes. Rule 10. The judgment holds that the draft rule providing that canoes not exceeding 18 ft. in length, when accompanied by sportsmen or campers to specified territory, do not form any part of the free baggage allowance, but may be carried in the baggage cars upon payment of charges in accordance with current tariff, is not an unreasonable one. The rule therefore is approved.

3. Limited Liability in regard to articles embraced in rules 5(a), 7, 9 and 10. Rule 11. This rule limits the liability of the companies to \$5 on any of the articles named in the four rules mentioned, unless a greater value is declared and extra charges paid at the time of checking in accordance with the carrier's current tariff, and is upheld by the judgment as being a reasonable one.

4. Miscellaneous Articles. Rule 12. This rule applies to the carrying as baggage of miscellaneous articles, such as tool chests, invalid's chairs, miner's packs, and so forth, which may be carried as baggage only upon condition that the carrying company is not liable for loss of or damage thereto. What the Board is concerned with, says the judgment, is, has it power to sanction the limitation, and is the limitation a reasonable one? The Board holds that the limitation is a reasonable one, and that it has, under the authority of Sec. 340 of the Railway Act, power to approve such limitations.

5. Storage. Rule 23 (d). This applies to the limitation of liability of the railway company as a carrier when the baggage is placed in storage. The judgment directs that the rule shall be reworded as follows: "After the expiration of 24 hours from the receipt of such baggage or articles in storage, the carrier shall be liable as a warehouseman only."

6. Baggage checked to other companies' lines. Rule 26 (c). The proposed rule provided that the liability of carriers for loss of baggage or other articles checked shall cease so soon as it shall have been delivered to the next connecting carrier, but the judgment directs that a new rule shall be substituted making the original carrier, other than the Canadian Government Railways, liable for the loss or damage occasioned on the connecting line in Canada to which the baggage, etc., has been delivered, to the extent provided for in the rules, but gives to the original checking line the right to recover the amount of such loss or damage from the connecting company.

Canadian Overseas Railway Construction Corps.

The nominal roll of officers, non-commissioned officers and men has been issued with militia orders. Following is the list of officers:

Rank.	Name.	Former Corps.	Next of Kin.	Address of Next of Kin.	Country of Birth.	Taken on Strength.	
						Place.	Date.
Lt.-Colonel.....	Ramsey, Colin Worthington Pope.	Territorials.	Ramsey, Florence E.	Montreal	Canada..	Montreal	June 12, 1915
Major.....	Hervey, Clinton Longley	C. of G.	Hervey, Mrs. E. G.	Lancaster, Ont.	U.S.A.	Montreal	Mar. 23, 1915
Major.....	Le Fevre, Alfred Tully	58th Regt.	Le Fevre, Mrs. G.	Lakefield, Ont.	Canada.	Montreal	Mar. 23, 1915
Major.....	Reid, John Garnet	97th Regt.	Reid, Mrs. Annie M.	S. S. Marie, Ont.	Canada.	St. John	Mar. 17, 1915
Major.....	Richardson, Bertram Poidevin.	S.A.C.	Ridgeway, Ethel M.	Montreal	England.	Montreal	Mar. 17, 1915
Captain.....	Grant, LeRoy Fraser	C. of G.	Grant, Mrs. C. McL.	Vancouver	Canada.	St. John	Feb. 19, 1915
Captain.....	Hillman, Daniel	Nil	Hillman, William J.	Clachan, Ont.	Canada.	Montreal	Mar. 27, 1915
Captain.....	Pettman, Frank Ernest	Nil	Pettman, Mrs. A.	E. Wellington, B.C.	Canada.	St. John	Mar. 31, 1915
Captain.....	Pope, John Henry	7th Hussars.	Pope, Florence E.	Calgary, Alta.	Canada.	Montreal	Mar. 17, 1915
Captain.....	Wellwood, Henry	38th Regt.	Wellwood, Jessie E.	Milton West, Ont.	Canada.	St. John	Mar. 31, 1915
Lieutenant.....	Connors, Francis Bernard	90th Regt.	Connors, Miss K. J.	Winnipeg	Canada.	St. John	Mar. 26, 1915
Lieutenant.....	Duncan, Erskine	Territorials.	Duncan, Mrs. A. C.	Belfast, Ire.	Scotland.	Cornwall	Mar. 20, 1915
Lieutenant.....	Flint, Charles	Nil	Flint, Mrs. E. A.	Winnipeg	Canada.	Calgary	Apr. 10, 1915
Vet. Lieutenant.....	Heenan, James Havelock	Nil	Heenan, Mrs. D. C.	Roland, Man.	Canada.	Winnipeg	June 12, 1915
Lieut. Asst. Adjt.	Lewis, Robert Percy	90th Regt.	Lewis, Mrs. Margt.	Winnipeg	England.	Winnipeg	Mar. 23, 1915
Lieutenant.....	MacCrimmon, Henry James	Nil	MacCrimmon, Don.	Williamstown, Ont.	Canada.	Williamstown.	Mar. 20, 1915
Lieutenant.....	Murray, Wm. Henry Douglas	58th Regt.	Murray, Mrs. M. W.	Bridge of Weir, Scot.	Scotland.	Montreal	Mar. 23, 1915
Lieutenant.....	Ramsay, Kenneth Allan	R.M.C.	Bullen, Mrs. C. F.	Winnetka, Ill.	Canada.	St. John	June 7, 1915
Lieutenant.....	Sherwood, Henry Lewis	R.M.C.	Allan, William A.	Ottawa	Canada.	Montreal	Mar. 18, 1915
Lieutenant.....	Turbett, Eyre Anthony Weldon.	Imp. Forces.	Turbett, Mrs. G. W.	Dublin, Ire.	Ireland.	St. John	June 8, 1915
Lieutenant.....	Wilson, LeRoy Zimmerman	C.E.	Wilson, Mrs. S. A.	Brampton, Ont.	Canada.	St. John	Mar. 26, 1915

The list also contains the names of 505 non-commissioned officers and men divided as follows: Co. Sergeant Majors, 2; Quartermaster Sergeant, 1; O.R. Sergeant, 1; P.M. Sergeant, 1; Sergeants, 6; Lance Corporals, 24; Corporals, 31; Sappers, 10; Privates, 429.

Capt. H. Wellwood, who returned to Montreal recently to obtain 120 railway men as a reinforcing draft for the original corps, is credited by the Montreal Star with stating that the corps' principal work in Belgium had been the building of a narrow gauge railway behind the first line of trenches extending the whole length of the Belgian front. The train is drawn by a 7 ft. gasolene engine, the cars being just over 3 ft. high. Everything is painted the color of the earth, and when a German flare lights up the locality the train comes to a sudden stop and is practically invisible. By this train food and munitions and everything needed in the trenches is conveyed during the night. One section the Canadians built was over flat country five miles in extent, and they were much exposed to shell fire, but as they only worked at night the casualties were

few. The corps was also engaged in the construction of concrete emplacements for guns in the trenches, and these have been so strongly constructed that when the big Allies drive took place the Germans shelled vigorously the Belgian lines, as a counterstroke, but the concrete and steel hoods, covered with loose earth and boulders, withstood all the explosives that were hurled against them and as the machine guns covered every possible avenue of approach the Germans had no chance of reaching the Allied lines.

From the last reports received the corps is at Longmoor Camp, Aldershot, Hampshire, England, where it has been since its return from Belgium. It is reported that 13 of the men were admitted to the hospital recently, on account of injuries received on the Woolmer Military Ry. Lt.-Col. Ramsey

has cabled for 20 additional men to replace casualties, discharges, etc. The corps has been highly complimented and mentioned in battalion orders for the excellent work done abroad, and on Nov. 1 it was announced that it was again under orders for foreign service, and reports stated that work was to be undertaken either in Russia or in the Persian Gulf territory.

A draft of 120 men has been recruited in Canada with two officers, to form a reserve base in England for reinforcements. The two officers selected are H. A. Lumsden, A. Can. Soc. C. E., who has been in England with the 19th Battalion, Canadian Expeditionary Force, for some time, and H. B. Sims, M. Can. Soc. C. E., formerly Assistant Division Engineer, C.P.R., Vancouver, B.C. The draft will go to England in charge of Capt. Wellwood and Sergt.-Major Wood.

Flag Protection of Track Under Repairs, Etc.

By C. Murphy, General Superintendent, Manitoba Division, Canadian Pacific Railway.

It is not my intention to go into statistics or history in connection with railway operation, but merely to mention some new difficulties that have arisen in recent times which go to increase the cost of operating a railway, and at the same time try and provide material for discussion. Everybody is familiar with the rapid and wonderful development in transportation in Canada; I, therefore, need only mention that the latest authentic figures available show that up to the middle of 1914 there were 30,795 miles of railway in Canada, capitalized at \$1,808,820,761.

Passengers carried, 1891 ..	13,222,568
Passengers carried, 1913 ..	46,230,765
Tons of freight handled	
1891	21,753,021 tons
Tons of freight handled	
1913	106,992,710 tons

Notice the enormous increase in twenty years. The cost of transportation has naturally gone up during the same period, and the present is probably the most trying time in the history of Canadian railways and for the operating officer. Earnings until recently were going down and operating expenses going up, presenting a problem that has been giving no little concern. As an illustration, the gross earnings of the railways in Canada in 1913 were \$218,660,000. In 1914 they had dropped to \$176,446,000, a decrease of \$42,214,000. The increases in operating expenses are many and varied, and in some cases are forced on the railways without any apparent benefit or safety over present methods.

With a view of prompting discussion or an expression of opinion, I will quote a communication sent in May by the Board of Railway Commissioners to the different railways in Canada under their jurisdiction, with reference to the adoption of certain flagging rules for track protection, the same being a report by the Board's Chief Engineer and Chief Operating Officer:—

"In order to bring about uniform practice and understanding on all railways under the Board's jurisdiction, we recommend that both the railway companies and the employes, maintenance and operating, be furnished with a copy of the following regulations, and that they be asked to show cause why an order should not go putting the same into effect:

"(a) On all lines over which trains are operated at a speed of 25 miles or more per hour, where defects in the track, obstructions, or any other cause render it impassable, or during the time repairs are being made which render it impassable, and until such time as the movement of trains may be resumed at such places, a man shall be employed to flag all trains, in each direction; which flagman shall be required to carry out all the provisions of rule 99.

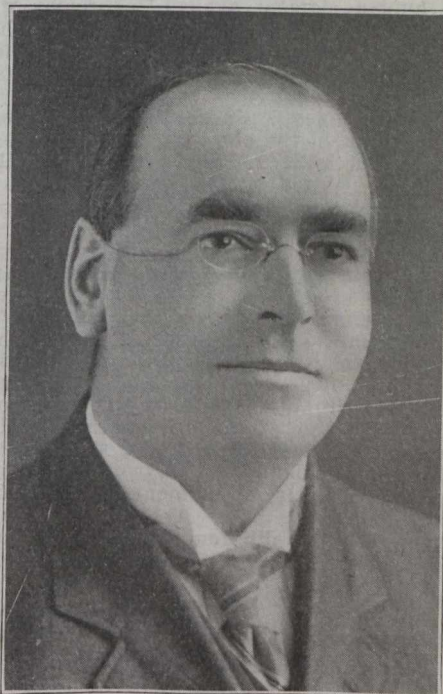
"(b) On all other lines protection at such places as mentioned in the preceding paragraph shall be provided in both directions as follows: A red flag by day and, in addition, a red light by night or when weather or other conditions obscure day signals, must be first fixed where it can be seen by the foreman in charge of the work, clear of passing trains, 6 ft. above rail level, on the same side of the track as the engineer of an approaching train, and where it will be clearly in his view, 1,200 yards (24 telegraph poles) if no down grade, and, if there is a down grade within one mile, 1,800 yards (36 telegraph poles) from the defective point, or as much further as may be necessary to insure full protection, with two torpedoes placed on the rails opposite to each other,

so as to make one explosion, 100 yards beyond the red signal. (If the alignment and view are such that a clear view of the signal cannot be maintained by the foreman, a man shall be employed to flag all trains, as set out in paragraph (a).

"(c) A train stopped by these signals shall be protected immediately as required by rule 99, sound whistle signal 14m, and wait until a signal to proceed is given by the foreman in charge of the work. The crew of a train so stopped shall replace the two torpedoes on the rails opposite each other, 100 yards from the red signal.

"(d) Flags for track protection shall not be placed between main tracks of double track lines, or where two separate lines of railway or two subdivisions of the same railway are parallel and close together.

"(e) The railway companies shall have examinations made from time to time to see that the regulations herein required are being carried out and observed.



C. Murphy.
General Superintendent, Manitoba Division,
Canadian Pacific Railway.

"(f) The operative part of this order shall be printed in the timetable instructions for the guidance of enginemen and trainmen."

The above communication was dealt with at a joint meeting of all the railways held in Toronto in July last, and after considerable discussion, it was recommended that the following communication be addressed to the Board of Railway Commissioners:—

"Referring to the joint report of the Board's Chief Engineer and Chief Operating Officer, and the new rules recommended therein in connection with the protection of track which may be broken or obstructed while under repairs, or other causes, this matter is one of vital importance to all railway companies in Canada, and as the recommendation involves a very drastic change in the practice of all such companies, it was deemed advisable to have the whole question submitted for consideration to a joint conference of the representatives of the various railway companies affected. The representatives appointed by the various companies have conferred in regard to

the matter and have most carefully considered the recommendations made in the above mentioned report. The result of these conferences has been that, while the representatives of the various companies felt confident that the records of operation on their respective lines show conclusively that the various practices followed by the companies have afforded assurance of safe operation, yet it was recognized that the desire for uniformity was reasonable. However, we believe that it is not practical to have the difference in flagging rule based upon differing speed of trains, because it is well known that such speed is subject to great variation on different portions of practically all lines of railway, whether they are branch lines or main lines, and moreover the section foreman is not in a position to know what speed any particular train will make. It is submitted that the proposed rule, B, recommended by the Board's officers would be practically inoperative, as at times trains run at a speed of 25 miles an hour or more on all lines. In lieu of the rules suggested, the following rules are respectfully submitted as affording a more practical method, and one which will insure safety of operation:—

"When the track is found impassable, due to any obstruction or defect, or if it is necessary to protect the track for the purpose of making repairs or renewals which require trains to stop, trains must be protected in the following manner:

"1. A flagman must be sent in each direction with proper signals, who will place at a point 3,600 ft. from the obstruction a yellow flag by day, and, in addition, a yellow light by night, beside the track on the same side as the engineer of an approaching train, so that it will be clearly in his view; and,

"2. Place two torpedoes not more than 200 ft. nor less than 100 ft. apart on the rail on the same side as the engineer of an approaching train, 300 ft. in advance of the yellow signal; and

"3. Then return to a point not more than 600 ft. from the obstruction and as much nearer as necessary to bring the signal within the vision of the foreman, and place a red flag by day, and in addition a red light by night, beside the track on the same side as the engineer of an approaching train, so that it will be clearly in his view; and

"4. Place two torpedoes on the rails opposite each other so as to make one explosion 150 ft. in advance of the red signal.

"The flagman may then return to assist in the work. When weather, or other conditions, obscure day signals, night signals must be used.

"A train finding a yellow signal displayed as above must observe rule 35 and run expecting to find a red signal displayed 3,000 ft. distant, in which case the train must stop before the engine passes such signal, and must not proceed until a proper signal is received from the point where work is being performed. Failing to find a red signal at such point indicated, the train must run at a speed not exceeding six miles an hour until a proceed signal is received or a green signal is found displayed on the engineer's side beyond the point where the obstruction existed.

"If torpedoes so placed are exploded while protection continues necessary, foreman must see that they are promptly replaced.

"If, for any reason, it is considered necessary to provide other protection, first send a flagman out in each direction with stop signals at least 1,500 ft. in day time, if there

is no down grade towards the obstruction within one mile and there is a clear view of 6,000 ft. from an approaching train; 3,600 ft. at other time and places, if there is no down grade towards the obstruction within one mile; 5,400 ft. if there is a down grade towards the obstruction within one mile.

"The flagman must, after going the required distance from the obstruction to insure full protection, take up a position where there will be an unobstructed view of him from an approaching train of, if possible, 1,500 ft., first placing two torpedoes (not more than 200 nor less than 100 ft. apart) on the rail on the same side as the engineer of an approaching train, 300 ft. beyond such position. The flagman must remain in such position until recalled or relieved.

"We feel confident that, after careful consideration of these rules, the Board's officers will agree that they will be found more workable, and at the same time quite as efficient as those recommended by them. Will you be good enough to submit this communication to the Board. If a further hearing is deemed advisable, we shall be glad to arrange for representatives of the various railway companies to be present."

It will readily be seen that if the Board's suggestion was put into effect it would mean additional men to about every three or four miles of railway, which would be no small amount in increased operation, and with, in our opinion, no increased safety or efficiency. I feel safe in saying, and without fear of contradiction, that we have had less trouble on our railways under our present method of flag protection for track than we have had under man protection, and I am of the opinion that conditions do not warrant any increase in expense such as would be involved by additional men. There may have been failures on the part of men to observe the rules and the signals, but that is a failure of the human element, not of the rules or regulations. It is admitted that up to the present time no rules or regulations have yet been adopted that will avoid failure of the human element.

The foregoing paper was read before the Western Canada Railway Club in Winnipeg recently. In the subsequent discussion a number of questions were asked which Mr. Murphy replied to as follows:—

It is proposed to use the present red, green and yellow flags, and it has been suggested that a flag be placed on two sticks, so that it will always be fully exposed, at right angles to the track. It was the unanimous opinion of the railway representatives at the meeting referred to that a perfectly safe method of flagging on double track, where traffic runs to the left, is as follows:—"On double track, where movement of traffic is to the left, two flags and two lights shall be placed, one on each side of the track to be protected; flags or lights so placed will not affect movement of trains on opposite track."

Rule 35 fully protects a track which has been damaged, but if the proposed rules are adopted, the flagging rules, so far as placing flags on the track is concerned, will be eliminated, and the protection given only by a man. In cases of emergency it would be hard to divide the man up, so that he could flag both ways. Under our present rules he can place his flags in one direction and take necessary steps to protect a train in the other direction.

I cannot recall a single case where an accident has happened under the present system of flagging, as the result of a flag being blown down. There is no difficulty in arranging for a flag to be put up so that it will not be blown down, and in addition to the flag you have the torpedoes on the track. I can, however, recall a case of man failure. Of course, there are times when

conditions are exceptional and rules call for exceptional precautions to be taken, and these would fully cover any cases that have so far arisen.

The Priest flanger, where it is used, is usually on some isolated branch line, but, I think, the cases where the flanger, throwing the snow up and covering the glass with steam, so as to hide the flag from the locomotiveman, would be few and far between. If the weather should be stormy or exceptionally unfavorable conditions apply, exceptional precautions could be taken. Occasionally conditions will occur that it is hard to surround with any rules or regulations.

Very often flags are not left out for the protection of a train when it stops on the main line, but only a torpedo, and that is considered ample protection under the circumstances. I think the rules are perfectly safe under these circumstances, and I do not see that there are any conditions that would make it different in the case of slow track.

We have all heard of cases where trains have been struck on account of not observing the rules, and we will undoubtedly have such cases so long as we are depending on the human element against failure, as we find in most cases it is this and not the rules that cause the trouble. I believe our present method of flagging is perfectly safe, and what is required is a generous application of efficiency testing to keep the men up to the mark in the observance of the rules.

I am not aware of any precedent established on United States lines to warrant bringing forward such a proposition as was made by the Board of Railway Commissioners' officers. To carry out the proposal as outlined would mean an enormous additional expense, and we all know that the railways cannot stand much more of that just now.

The operation of railways is one of the greatest questions before railway people and the public. The operating end is so dovetailed in with other departments that you can hardly find where it begins and ends, and for this reason I am of the opinion that the superintendent of a district should be the head of every department touching the operation of the line. It is only by this means that the different departments can be handled to the best advantage to all concerned.

Rates on Asbestos Sand from Quebec to Ohio.

In the case of Philip Carey Mfg. Co. et al vs. Grand Trunk Western Ry. et al, it was complained, in April last, that rates on asbestos sand in carloads from Robertson, Thetford, and Sherbrooke, Que., to Lockland and Rockdale, Ohio, are unreasonable and unjustly discriminatory. Following is a summary of the Interstate Commerce Commission's decision given recently:—

Rates in question do not conform to the general adjustment of rates between the Canadian territory of origin and the group in which these destinations are located; the rates on asbestos sand to Rockdale and Lockland are higher than from the same points of origin to Chicago and Milwaukee, while the rates on asbestos fibre from the same points of origin to Rockdale and Lockland are lower than from the same points of origin to Chicago and Milwaukee, the fibre being a lighter loading commodity and much more valuable than the sand. The rates attacked are therefore unjustly discriminatory against complainants.

Following International Paper Co. v. D. & H. Co., 33 I.C.C., 270, and cases therein cited, the Commission's jurisdiction in connection with transportation to or from an adjacent foreign country is over that portion of the

transportation within the confines of the United States. The Commission cannot, therefore, prescribe joint through rates from points in Canada to points in the United States, but it can control the rates which the lines in the United States charge for services rendered within the United States. Joint rates from and to points in Canada are a convenience to the public and the shippers and should be encouraged. It is therefore expected that the defendants will comply with the finding that the rates to Lockland and Rockdale are unjustly discriminatory to the extent that they exceed the rates contemporaneously maintained to Chicago or Milwaukee by proper readjustment of the present joint through rates. If this is not done an order will be entered requiring the defendants that are subject to our jurisdiction to establish in lieu of the present rates joint or local rates from the ports of entry in the United States to Lockland and Rockdale which shall be no higher than those contemporaneously maintained to Chicago or Milwaukee.

W. H. Biggar, K.C., and E. W. Beatty, K.C., represented the Grand Trunk and Canadian Pacific respectively before the Commission.

Corrections for the Erring.

Some of the United States railway publications get badly tangled up occasionally in their references to Canadian railway matters. For instance, Railway Engineering & Maintenance of Way in its last issue published some biographical information about W. A. Cowan, A.M. Can. Soc. C.E., who it says has been "recently appointed Division Engineer of the Canadian Northern Railways at Cochrane, Ont.," and further on it states that in 1914 he was appointed "Resident Engineer of the Canadian Northern Ry. at Truro, and held that position until his recent appointment as Division Engineer of the National Transcontinental Ry." Of course there is no "Canadian Northern Railways," but there is the Canadian Northern Railway, which, however, goes nowhere near Cochrane, and Mr. Cowan is not in its service. Nor was he in its service at Truro, N.S., for a similar reason, viz.: that the C.N.R. has no line in that vicinity, but he was until recently Resident Engineer, Intercolonial Ry., at Truro, and is now Division Engineer, National Transcontinental Ry., at Cochrane, as announced in Canadian Railway and Marine World for July.

Railway Engineering & Maintenance of Way also states that H. MacLaren has been appointed recently "Division Engineer of the Toronto District of the Canadian Northern Ry. at North Bay, Ont.," and in the same paragraph it says that "he succeeds in the Toronto District J. D. Evans, transferred." H. MacLaren has not been appointed Division Engineer at North Bay and the Canadian Northern's Toronto Division or District does not include North Bay. He has not succeeded J. D. Evans in the Toronto District, for the simple reason that Mr. Evans was formerly Division Engineer of the Ottawa District at Trenton, and not of the Toronto District. And further, there is no H. MacLaren in the C.N.R. service as Division Engineer. G. P. MacLaren is Division Engineer of the Toronto District, with office at Rosedale, as announced in Canadian Railway and Marine World for October.

The charges against the Canadian Northern Ry. for contravening sections of the Saskatchewan Liquor Act were withdrawn Oct. 29, as it was shown that the company was making every effort to install the necessary signs in its cars as quickly as possible.

Sale of Canadian Northern Railway Tickets at Toronto Union Station.

Sir Henry L. Drayton, Chief Commissioner, Board of Railway Commissioners, gave the following decision, Nov. 18: This is an application made by the Canadian Northern Ry. for an order requiring the Grand Trunk Ry. to allow the Canadian Northern to have the privilege of having its tickets on sale at the ticket office operated by the Grand Trunk and Canadian Pacific jointly, on the train floor in the Union Station, Toronto. The G.T.R. opposes the application. In that company's answer it points out that the Canadian Northern has a ticket office on the main floor of the Union Station, and submits that that is all that the Union Station management is required to furnish. The Grand Trunk admits that there is an office on the train floor, jointly maintained by the Grand Trunk and Canadian Pacific Railways, which is principally used for selling tickets to passengers on through journeys who have not been able to buy through tickets at local stations. The Grand Trunk also states that no doubt the Union Station managers would make an effort to supply similar accommodation to the Canadian Northern, if it really needed it, if there was assurance given of payment for the service rendered. The answer further points out that the Canadian Northern is now indebted to the Grand Trunk for about \$260,000, and that the Canadian Northern owes the Toronto Union Station management \$5,090, which constitutes four months' arrears for services in the Union Station.

Unquestionably there are passengers who have only purchased tickets locally to Toronto. Ordinarily speaking there is no reason why these people should not receive exactly the same facilities as passengers on other roads similarly situated. There is no doubt at all as to the inconvenience of having to leave the train shed and go to the rotunda, in view of the manner in which the present Union Station is laid out. It is also obvious, that in case of a close connection, passengers having to do this may be so delayed as to lose their trains, or leave baggage behind unchecked. There is also no doubt that, to some extent, the Canadian Northern suffers, as tickets might well be required for competitive points; and, in the absence of C. N.R. tickets on sale in the train shed, there is not much doubt that the traveller would buy his ticket on the competitive line rather than go to the ticket office on the main floor. I have no doubt that the service is one properly required both in case of the public and in the interests of the Canadian Northern. The best proof that the service is necessary as a convenience is to be found in the fact that the Grand Trunk and Canadian Pacific Railways have, of their own motion, found it necessary to install it for themselves. I am of the opinion that this office should sell tickets for the Canadian Northern in the same manner as it now sells tickets for the two other railways, and should exchange Canadian Northern tickets for orders, as is now done for the other lines. There is no doubt that the Canadian Northern should pay for what it gets. It may well be that the Grand Trunk, on account of the condition of accounts between it and the Canadian Northern, can reasonably object to entering into any joint arrangements or extending any further credit to the Canadian Northern. The cost, however, of this service cannot be great; and the Grand Trunk should give the necessary instructions so that the men now selling tickets for the Canadian Pacific and Grand Trunk in the trainshed ticket office will

perform like duties for the Canadian Northern. The added cost will be practically nothing. Nothing has been said by the Grand Trunk on the question of remuneration. Under the circumstances, the Canadian Northern will pay one-third of the cost of operating the office to the extent of the actual salaries and out-of-pocket expenses. In view of the small amount of business of the Canadian Northern, no rental charges are to be included in the expenses that company contributes to. This apportionment of cost made as it is without full or proper information, is tentative, and if objected to by either party, the question will be listed for hearing and final determination.

The Assistant Chief Commissioner, D'Arcy Scott, concurred. Commissioner McLean said: The dilatoriness shown by the Canadian Northern in settling its outstanding accounts with the Toronto Union Station management makes me hesitate in agreeing to an arrangement which may enable the railway to owe some more money. At the same time there is a public need which justifies some such arrangement as is recommended and this public need must be considered. But, if this need is to be met in the way requested by the Canadian Northern, the continuance of the arrangement should be contingent on prompt adjustment by it of its share of the expense attaching to the arrangement.

Proposed Railway Across Nicaragua.—A press dispatch from Washington, D.C., states that a representative of a Canadian firm, with headquarters in Winnipeg, was recently in Managua, to discuss with the Nicaraguan President the possibility of obtaining a concession to build a railway across the isthmus through Nicaragua, and that it was decided not to grant such a concession at present.

Grand Trunk Railway Fire Brigade Competitions.

W. D. Robb, Superintendent of Motive Power, G.T.R., announces that two of the annual fire brigade competitions for employees have been won this year by the car shops men at London, Ont. The company has employees' fire brigades at the various main repair shops, locomotive house terminals and other large buildings. The organization comprises hose and hook and ladder companies, the members of which are supplied with coats, helmets, rubber boots, etc. The men are regularly drilled and reside within easy distance of the shops in order that they can respond promptly to an alarm. The company recognizes the work of the men composing these fire brigades in many ways, granting additional free transportation to themselves and families and awards prizes in the annual competitions amounting to \$250. The "dry" race was won this year by no. 2 company of the car shops at London, and they were also winners in the "wet" race. The hook and ladder race was won by a Montreal team from the car department.

Passenger Meetings at Buffalo.—The Great Lakes and St. Lawrence River Rate Committee, International Water Lines Passenger Association, and Niagara Frontier Summer Rate Committee, will meet at Hotel Iroquois, Buffalo, N.Y., in January. The Niagara Frontier Summer Rate Committee's rate representatives will meet on Jan. 4 and 5 at 9 a.m. for compilation of fares, etc. The general meeting will be on Jan. 6 at 10.30 a.m. The Great Lakes and St. Lawrence River Rate Committee will meet immediately following the adjournment of the Niagara Summer Rate Committee meeting.

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

Week ending Nov. 12, 1915.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Flax, bushels.	Totals, bushels.
Fort William—					
C.P.R.	3,121,222	427,512	81,476	24	3,630,234
Consolidated Elevator Co.	954,905	210,937	18,378	45,965	1,230,185
Empire Elevator Co.	1,527,129	460,453	51,339	96,793	2,135,714
Ogilvie Flour Mills Co.	975,530	64,286	34,343	.....	1,074,159
Western Terminal Elevator Co.	1,303,815	143,746	13,101	73,093	1,533,755
G.T. Pacific	2,853,476	687,533	42,030	55,431	3,638,470
Grain Growers' Grain Co.	1,735,673	256,852	37,023	.....	2,029,548
Fort William Elevator Co.	627,815	280,489	35,051	14,989	958,344
Eastern Terminal Elevator Co.	876,776	179,075	31,782	.....	1,087,633
Port Arthur—					
Port Arthur Elevator Co.	2,659,651	758,405	104,611	62,435	3,585,102
D. Horn & Co.	277,950	78,591	42,938	28,887	428,366
Dominion Government Elevator ...	1,317,106	465,682	39,505	72,500	1,894,793
Grain afloat ....	.....	.....	.....	.....	.....
Total Terminal Elevators	18,231,048	4,013,561	531,577	450,117	23,226,303
Calgary Dom. Govt. Elevator	12,334	38,637	1,572	.....	52,543
Saskatoon Dom. Govt. Elevator ...	160,507	5,414	.....	2,126	168,047
Moosejaw Dom. Govt. Elevator ...	47,990	7,391	344	2,699	58,424
Total Interior Term'l Elevators	220,831	51,442	1,916	4,825	279,014
Depot Harbor ....	.....	.....	.....	.....	.....
Midland—					
Aberdeen Elevator Co.	414,747	.....	.....	.....	414,747
Midland Elevator Co. ....	.....	.....	.....	.....	.....
Tiffin, G.T.P.	1,151,618	20,000	55,175	.....	1,226,793
Port McNicoll	660,763	595,459	2,723	.....	1,258,945
Collingwood	41	.....	.....	*1,947	1,988
Goderich	462,035	63,930	.....	22,344	548,309
Kingston—					
Montreal Transportation Co. ....	.....	246,581	.....	.....	246,581
Commercial Elevator Co.	3,160	139,729	.....	.....	142,889
Port Colborne	809,887	28,525	.....	8,920	847,332
Prescott ....	.....	.....	.....	.....	.....
Montreal—					
Harbor Commissioners No. 1	771,915	262	4,890	.....	777,067
Harbor Commissioners No. 2	898,143	573,168	1,255	.....	1,472,566
Montreal Warehousing Co.	307,369	70,285	.....	.....	377,654
Quebec Harbor Commissioners	3,509	6,574	.....	.....	10,083
West St. John, N.B.	14,903	.....	.....	.....	14,903
Halifax, N.S. ....	.....	.....	.....	.....	.....
Total Public Elevators	5,498,090	1,744,513	64,043	*1,947	7,339,857
Total Quantity in Store	23,949,969	5,809,516	597,536	486,206	30,845,174

*Corn.

Mainly About Railway People Throughout Canada.

Sir H. Montagu Allan has been elected Vice President, Royal Trust Co., succeeding the late Sir William Van Horne.

F. W. Peters, General Superintendent, British Columbia Division, C.P.R., has been elected President of the Vancouver Canadian Club.

J. McNaught, Solicitor, C.P.R., Montreal, was presented with a purse of money on leaving for England to enlist for active service.

H. W. Mudge, formerly President, Rock Island System, has been elected President of the Denver & Rio Grande Rd., succeeding B. F. Bush.

Sir Henry L. Drayton, K.C., Chairman, Board of Railway Commissioners, has been elected a member of the Imperial Society of Knights Bachelor.

E. T. Slocum, of Detroit, Mich., who is said to have been one of the original directors of the Canada Southern Ry., died there Nov. 21, aged 76.

H. Hulatt, Manager of Telegraphs, G.T.R. and Grand Trunk Pacific Ry., Montreal, has been elected a director of the Grand Trunk Pacific Telegraph Co.

A. W. Smithers, Chairman, G.T.R. and Grand Trunk Pacific Ry., sailed from Montreal, Nov. 26, for England, after completing his annual visit to Canada.

Lieutenant G. S. Boyle, reported, Nov. 15, to have died of wounds received in the Dardanelles district, was formerly on the Intercolonial Ry. engineering staff.

Lieutenant S. L. Cullen, of the C.P.R. Publicity Department, Montreal, was presented recently with a silver cigarette case by the staff, on leaving for active service.

Baron Welby, who died in England, Oct. 30, aged 83, was for many years prominent in financial circles in London, and was for some time a director of the Grand Trunk Ry.

B. T. Chappell, heretofore Superintendent, Canadian Northern Ry., Saskatoon, Sask., was given a presentation by business men there on being transferred to Vancouver, B.C.

Count Jacques de Lesseps, who is a son in law of Sir Wm. Mackenzie, President, Canadian Northern Ry., has been awarded the French military cross for valor in aviation work.

L. W. Baldwin, formerly General Superintendent of all Illinois Central Ry. lines south of the Ohio River, has been appointed General Manager of the Central of Georgia Ry., at Savannah.

Lady and Miss Van Horne, who spent several weeks at their place, Covenhoven, St. Andrews, N.B., after Sir William's death, returned to their town house in Montreal early in November.

The name of the C.P.R. station, formerly called Muskoka, Ont., 23 miles south of Parry Sound, has been changed to MacTier in honor of **A. D. MacTier**, General Manager, Eastern Lines, C.P.R.

J. W. Stewart, President, Pacific Great Eastern Ry., returned to Vancouver, B.C., towards the end of October, after an absence of three months, during which he visited his early home in Scotland.

J. S. Dennis, Assistant to the President, and in charge of the National Resources Department, C.P.R., Calgary, Alta., has been elected First Vice President of the International Irrigation Congress.

E. J. Chamberlin, President, G.T.R., and Grand Trunk Pacific Ry., has been elected a director of Molson's Bank, in place of D.

McNicoll, formerly Vice President, C.P.R., who retired owing to ill health.

F. J. Moss, who is stated in a cablegram to have been Canadian Northern Ry. Emigration Agent at London, Eng., is said to have been placed on the Canadian Pay and Record Office staff at Westminster.

F. C. Salter, European Traffic Manager, Grand Trunk Ry., London, Eng., was one of the speakers at the installation of Dr. Lewis Hunt, a former Nova Scotian, as Mayor of Richmond-on-Thames, Eng., November 9.

The Sydney, N.S., house of **J. H. Plummer**, President, Dominion Steel Corporation, Sydney and Louisburg Ry., and Cumberland Railway and Coal Co., was totally burned Nov. 10. Mr. Plummer is ill at his Toronto house.

R. L. Latham, Chief Engineer, Toronto, Hamilton & Buffalo Ry., Hamilton, Ont., and **L. E. Silcox**, Division Engineer, Hudson Bay Railway, Winnipeg, have been elected mem-



W. P. Hinton, Traffic Manager, Grand Trunk Pacific Railway and Grand Trunk Pacific Coast Steamship Co., and Western Traffic Manager, Canadian Government Railways.

bers of the American Railway Engineering Association.

Major George Janin, M.Can.Soc.C.E., City Engineer of Montreal, who commanded a corps of engineers which he raised for war service, was drowned when the hospital ship Anglia was sunk in November by striking a mine.

The Vancouver Board of Trade on Nov. 14 expressed regret at the resignation of **G. E. Graham**, as Vice President, on account of his removal to Kentville, N.S., where he has been appointed General Manager, Dominion Atlantic Ry.

J. K. L. Ross, one of the C.P.R. directors, applied on behalf of the estate of his late father, James Ross, for \$500,000 of the Dominion war loan issued in November. Sir Herbert Holt, another C.P.R. director, applied for \$100,000.

W. A. Mason, a G.T.R. ticket agent at Toronto, was committed for trial at Toronto, Nov. 16, on a charge of the theft of \$1,500, received for the sale of tickets and unac-

counted for. He pleaded not guilty and was granted bail of \$3,000.

R. W. Burnett, formerly General Master Car Builder, C.P.R., Montreal, is now Vice President, National Car Equipment Co., 339 Railway Exchange, Chicago, Ill., which handles various railway specialties and represents the Falk Co., Milwaukee, Wis.

Sir Thomas G. Shaughnessy, President, Canadian Pacific Ry.; Sir William Mackenzie, President, Canadian Northern Ry., and Sir Henry L. Drayton, Chairman, Board of Railway Commissioners, attended Sir Charles Tupper's funeral in Halifax, N.S., Nov. 15.

Lt. Col. Wm. Hendrie, of Hendrie & Co., Ltd., Hamilton, Ont., cartage contractors, G.T.R., who went overseas in 1914 as Major of the 48th Highlanders, has returned to Canada. He served recently in the Remount Department in France and England.

H. Le Jeune, formerly of the C.P.R. Hotel Department, who was stricken with paralysis at Winnipeg, Sept. 9, and was removed on Oct. 19 from the Royal Alexandra Hotel, where he had lived for several years, to St. Boniface Hospital, died Nov. 22, aged 71.

Lord Strathcona's will filed recently for probate in Ontario, shows the gross value of the estate at about \$28,000,000, of which \$4,000,000 is represented by real estate in Canada; \$4,113,000 by 19,475 shares in the C.P.R.; \$646,000 by 2,777 shares in the Bank of Montreal.

S. R. Hesson, who died at Stratford, Ont., Nov. 17, aged 86, was connected with the earlier days of railway building in Canada, having been chairman of the trust board under the control of which were the funds for the construction of the Georgian Bay and Lake Erie Ry.

E. G. Darnley, who is stated to have been formerly in C.P.R. service in Canada, is reported to have been awarded the contract by the Australian Government to raise the German cruiser Emden, which was driven ashore by the Australian warship Sydney, at Keeling Island, in Nov. 1914.

F. P. Brady, General Superintendent, National Transcontinental Ry., Cochrane, Ont., was reported, early in November, to be seriously ill in a Montreal hospital, but on Nov. 3 a statement issued from Cochrane announced that there was no foundation for the rumor and that he was in his usual state of health.

Sir Andrew Noble, who died in Scotland towards the end of October, aged 84, was Chairman, since 1901, of Sir W. G. Armstrong, Whitworth & Co., Ltd., shipbuilders and ordnance manufacturers, of England, builders of several special vessels utilized in Canadian service. He is survived by Lady Noble, who is a native of Quebec.

G. Cummings, who died at Allandale, Ont., aged 65, had been in G.T.R. service for 47 years, chiefly as a locomotive driver. In his early days with the company he was on the run between Toronto and Collingwood, when wood was used as fuel, and a full freight train consisted of 18 cars, each of not more than 10 tons weight. He was pensioned on Apr. 1.

E. B. Pryor, who has been with the Wabash Rd. through its many vicissitudes for 35 years, for the past four of which he has acted as one of the receivers, has retired from active railway service, on the conclusion of the receivership and the reorganization of the company, and is devoting his time to the affairs of the State National Bank, St. Louis, Mo., of which he is President.

William Downie, formerly General Superintendent, Atlantic Division, Canadian Pacific Ry., at St. John, N.B., and now of Whitby, Ont., was operated on at Wellesley Hospital, Toronto, Nov. 1, for gall stones. On Nov. 20 he was removed to another private hospital at 33 St. Vincent St., Toronto. He is convalescing satisfactorily and is expected to be able to leave the hospital early in December.

T. E. Boddy, who died at Toronto, Nov. 18, from gas asphyxiation, was the first train dispatcher on the Credit Valley Ry., at Streetsville Jct., Ont., and was subsequently ticket agent, C.P.R., at the Union Station, Toronto, and later, City Ticket Agent, C.P.R., Peterborough, Ont., which position he held until he was superannuated. The funeral at Streetsville on Nov. 22 was attended by several local railway and steamship officials.

Dr. J. Alexander Hutchison, Chief Medical Officer, Grand Trunk and Grand Trunk Pacific Railways, has three sons enlisted for overseas service, viz., Bruce Caverhill, aged 21, McGill science student, trooper, Headquarters Staff, Second Brigade, Canadian Mounted Rifles; Keith Ogilvie, aged 19, McGill medical student, private, no. 3, Canadian General Hospital; and Ross Rutherford, aged 18, McGill art student, sapper, no. 2 Signal Co., Canadian Engineers.

John Howard, who died at Orangeville, Ont., recently, entered railway service with the Credit Valley Ry., about 1880. In 1897, on the absorption of the Credit Valley Ry. by the C.P.R., he was appointed station agent at Mount Forest, and in 1900 was transferred to Orangeville, where he remained until retired under the pension rules. K. R. Howard, a travelling auditor for the C.P.R. at Brandon, Man., and H. W. Howard, agent, Canadian Northern Ry., Kindersley, Sask., are sons.

Harold S. Granger, who has been appointed City Freight Agent, Canadian Northern Ry., Edmonton, Alta., was born at London, Ont., Aug. 19, 1892, and entered railway service Mar. 3, 1910, since when he has been, to Aug., 1911, clerk, District Freight Office, C.P.R., London, Ont.; Aug. to Oct., 1911, clerk, General Freight Office, Canadian Northern Ry., Winnipeg; Oct., 1911, to Jan., 1915, chief clerk, District Freight Agent's office, C.N.R., Edmonton, Alta.; Jan. to Oct., 1915, Soliciting Freight Agent, C.N.R., Saskatoon, Sask.

Henry Goldmark, Consulting Engineer, New York, N.Y., who has done considerable work in Canada, has been retained to take charge of the fabrication, in the United States, of the lock gates, sluice valves, operating machinery and electrical equipment for the large tidal lock which will give access to the new harbor at Chemulpo, Korea. The work is to be done in accordance with competitive plans prepared by Mr. Goldmark for the McClintic-Marshall Co., of Pittsburg, successful bidders on the entire equipment, which were adopted by the harbor authorities.

Lieutenant J. C. Hughes, of the Royal Canadian Engineers, who was reported, Nov. 16, to have been killed in action, by a shell, at Loos, was the only son of Jas. L. Hughes, formerly Inspector of Schools, Toronto, and a nephew of Major General Sir Samuel Hughes, K.C.B., Minister of Militia. He was educated at Parkdale Collegiate and the School of Practical Science, Toronto, graduating in 1909 with the degree of B.A.Sc. He was for some time on the C.P.R. engineering staff, and was engaged on location of the Campbellford, Lake Ontario and Western Ry. Just prior to the war, he was engaged in railway location work in New Brunswick.

John Alton Audrain, who has been appointed Trainmaster, C.P.R., Minnedosa,

Man., was born at St. John's, Jersey, Channel Islands, Jan. 23, 1883, and entered C.P.R. service in Apr., 1897, since when he has been, to 1904, apprentice, car shops, Winnipeg; 1904, to July 1, 1905, mechanic, car shops, Winnipeg; July 3 to Aug. 31, 1905, express messenger, Dominion Express Co., Winnipeg to Gretna and Emerson; Aug. 31, 1905, to May 1, 1906, mechanic, car shops, C.P.R., Winnipeg; May 10, 1906, to July 28, 1910, brakeman and baggageman, main line and branches out of Winnipeg; July 28, 1910, to Sept. 7, 1915, station master, Winnipeg.

W. Roberts Devenish, A.M.Can.Soc.C.E., who has been appointed Superintendent, District 2, Intercolonial Ry., Campbellton, N.B., was born in County Tipperary, Ireland, Nov. 21, 1882, and entered transportation service in 1903, serving with the C.P.R. for eight years, in various capacities in the Engineering and Maintenance of Way Departments, from rodman to Assistant Division Engineer, Lake Superior Division. He was appointed Division Engineer, Canadian Government Railways, Moncton, N.B., in



J. A. Audrain,
Trainmaster, District 3, Manitoba Division,
Canadian Pacific Railway.

Sept. 1913, and for a time prior to that he acted as Assistant Engineer with the National Transcontinental Ry. Investigation Commission.

Lieutenant-Colonel W. B. Kingsmill, who has been appointed to the command of the 123rd Battalion, Canadian Expeditionary Forces, is a member of the firm of Saunders, Torrance and Kingsmill, legal representatives of the Michigan Central Rd., and its subsidiaries in Canada. He is a son of the late Nicol Kingsmill, K.C., who was for 40 years secretary of the Canada Southern Ry. Co., owned by the M.C.R., and is grandson of the late W. A. Thomson, M.P., one of the promoters and builders of the Canada Southern Ry. His paternal grandfather was an officer in the regiment which guarded Napoleon Bonaparte, during his exile at St. Helena. Vice Admiral Kingsmill, of the Canadian Naval Service, is a cousin.

William Alan Whyte, who has been appointed District Freight Agent, Canadian Northern Ry., Regina, Sask., was born at Hornsey, England, Nov. 24, 1890, and en-

tered transportation service, July, 1906, since when he has been, to July, 1909, in the Outward Freight Department, Allan Line Steamship Co., London, England; Sept. 8 to Oct. 31, 1909, in Import Foreign Freight Office, C.P.R., Montreal; Nov. 6, 1909, to Jan. 31, 1911, in Local Freight Office, C.P.R., Regina, Sask.; Feb. 1, 1911, to Feb. 25, 1915, City Freight Agent, Canadian Northern Ry., Regina, Sask.; Mar. 1, to Oct. 31, 1915, City Freight Agent, C.N.R., Calgary, Alta.

W. S. Cookson, who has been appointed General Passenger Agent, G.T.R., Montreal, was born at Port Jervis, Orange County, N.Y., June 12, 1871, and entered railway service July 15, 1886, since when he has been, to Nov. 1, 1886, clerk in Car Record Office, Erie Rd., Jersey City; Nov. 1, 1886, to Dec. 1, 1899, clerk in General Roadmaster's office, Chicago and Western Indiana Rd., Chicago, Ill. (the G.T.R. is part owner of this railway); Dec. 1, 1899, to May 1, 1909, chief clerk, Assistant General Passenger Agent's office, G.T.R., Chicago, Ill.; May 1, 1909, to June 1, 1910, Assistant General Passenger Agent, G.T.R., Chicago, Ill.; June 1, 1910, to Nov. 13, 1915, Assistant General Passenger Agent, G.T.R., Montreal.

Hugh McCauley Bird, whose appointment as acting Trainmaster, District 3, National Transcontinental Ry., Graham, Ont., was announced in our last issue, was born at Alton, Ont., Aug. 31, 1874, and entered transportation service in 1890, since when he has been, to 1896, freight clerk, C.P.R., Owen Sound, Ont., and West St. John, N.B.; 1896 to 1897, clerk, C.P.R., Montreal; 1897 to 1900, freight checker, C.P.R., Owen Sound and Fort William, Ont.; 1900 to 1910, train man, Canadian Northern Ry., Port Arthur and west, and out of Toronto to Parry Sound, Ont.; 1910 to 1912, Trainmaster, New Canadian Co., Port Daniel, Que.; 1912 to 1915, conductor and agent, MacDonnell and O'Brien, railway contractors, Parent, Que.

G. A. Stokes, who has been appointed Superintendent of Sarnia Tunnel Terminals, G.T.R., Port Huron, Mich., was born in Nassagaweya Tp., Ont., July 23, 1879, and entered G.T.R. service, Nov. 15, 1897, since when he has been, to Oct. 15, 1899, operator, Listowel, Ont.; Oct. 15, 1898, to Mar., 1899, relieving agent; Mar., 1899, to Apr., 1907, agent, consecutively, at Harriston, Wingham, Warton and Brantford, Ont.; Apr., 1907, to Nov. 1, 1910, dispatcher, Stratford, Ont.; Nov. 1, 1910, to Sept. 13, 1912, Yardmaster, Don station, Toronto; Sept. 13, to Oct. 25, 1912, General Yardmaster, Toronto Terminals; Oct. 25, 1912, to Aug. 10, 1913, Terminal Superintendent, Toronto; Aug. 10, 1913, to Nov. 4, 1915, Division Agent, Ontario Lines, Toronto.

W. J. Rooney, who has been appointed Division Superintendent of Telegraphs, Alberta and British Columbia Lines, Grand Trunk Pacific Ry., Edmonton, Alta., was born at Toronto, May 22, 1882, and was from Oct. 19, 1896 to Jan. 17, 1903 in the Toronto Electric Light Co.'s stores and wire departments; Jan. 17, 1903 to Nov. 30, 1905 in Great North Western Telegraph Co.'s construction department; Dec. 1, 1905 to Jan. 15, 1913, General Foreman of Telegraph Construction, Grand Trunk Pacific Ry.; Jan. 15, 1913 to Oct. 25, 1915 Superintendent of Telegraph Plant, G.T.P.R., Winnipeg. Over 600 miles of telegraph line in the prairie provinces were built under his personal direction and he had jurisdiction over all telegraph and telephone construction undertaken by the company between Edmonton, Alta., and Prince Rupert, B.C.

Right Honorable Sir Charles Tupper, G.C. M.G., who died at Bexley Heath, England, Oct. 30, was born at Amherst, N.S., July 2, 1821. He played an important part in the

confederation of the various Provinces now forming the Dominion of Canada, was Minister of Public Works in 1878, and later was appointed the first Minister of Railways and Canals. During his regime the Government policy in connection with the enlargement of the Welland Canal, the deepening of the St. Lawrence channel and a number of improvements on the Intercolonial Ry., was carried out, and in addition, the construction, by a private company, of the Canadian Pacific Ry. was undertaken. From April to June 1896, he was Premier of the Dominion. He retired from public life in 1900 and had since lived in England.

Harry Logan, Traffic Manager, Los Angeles Dock Co., Los Angeles, Cal., who died there, Nov. 9, from malaria, caused presumably from a mosquito bite while aboard a vessel from South America which was being unloaded, was born in Toronto and started work in District Freight Agent's office, Grand Trunk Ry., there. He was in the Lehigh Valley Rd.'s Freight Department in Toronto for about 15 years as junior clerk, chief clerk and Travelling Freight Agent consecutively. Then he was Travelling Freight Agent for the Canadian Northern Ry. for about 4 years, after which he went to California. He was a well known yachtsman and a member of the Royal Canadian Yacht Club and was at one time in the Queen's Own Rifles and afterwards in the Governor General's Body Guard.

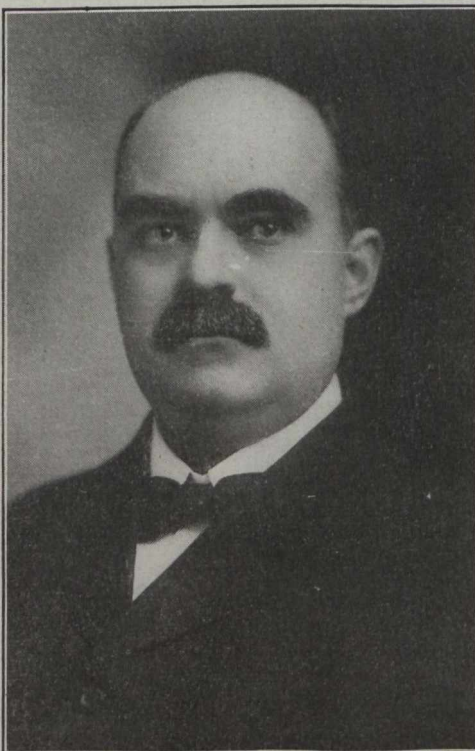
George Edward Graham, whose appointment as General Manager, Dominion Atlantic Ry., Kentville, N.S., was announced in our last issue, was born in May 1870, and entered C.P.R. service July 4, 1888, since when he has been, to June 1900, operator, Havelock, Ont.; June 1900 to Nov. 1, 1901, station and weighing inspector, Winnipeg; Nov. 1, 1901 to Feb. 1, 1905, Supervisor of Weighing, Montreal; Feb. 1, 1905 to Aug. 7, 1906, Superintendent, Winnipeg; Aug. 7, 1906 to Mar. 1, 1907, Assistant Superintendent, Brandon, Man.; Mar. 1, 1907 to Feb. 17, 1908, Superintendent, Brandon, Man.; Feb. 17, 1908 to Jan. 1, 1910, Superintendent, Fort William and Port Arthur, Ont.; Jan. 1, 1910 to Sept. 30, 1913, Superintendent, Vancouver, B.C.; Sept. 30, 1913 to Oct. 1915, General Manager, Coquitlam Terminal Co., Ltd., Vancouver, B.C.

W. B. Smith, General Manager, Dominion Transport Co., who died at his home in Montreal, Nov. 8, was born at Huntly, Scotland, in 1829, and came to Canada in 1855, entering the service of the late John Shedden, the founder of the Shedden Forwarding Co., in London, Ont. He was transferred to Montreal to take charge of that company's business there in 1860, and was later connected with the late D. Morrice in the cartage business for the Quebec, Montreal and Ottawa Ry., now part of the C.P.R. Subsequently he organized the Dominion Transport Co., of which he was General Manager until his death. T. J. Smith, General Freight Agent, Atlantic Service, C.P.R., London, Eng., is a son, and V. G. R. Vickers, Manager Foreign Department and Superintendent Atlantic Division, Dominion Express Co., Montreal, is a son in law.

G. H. Hedge, who has been appointed General Master Mechanic, Western Lines, Canadian Northern Ry., Winnipeg, was born at Neath, Wales, May 26, 1865, and entered railway service in 1879 as machinist apprentice with the Great Western Ry., in England. He came to Canada in 1884, since when he has been, from Mar., 1884, to 1890, fitter in C.P.R. shops at Ottawa, Schreiber, Montreal, Hochelaga and again at Montreal, where he was leading hand; 1891 to 1893, Locomotive Foreman, C.P.R., Megantic, Que.; in 1893 he was transferred to Farnham, Que., and subsequently to Montreal;

1896 to 1901, General Locomotive Foreman, C.P.R., Farnham, Que.; 1901 to 1902, Locomotive Foreman, C.P.R., Medicine Hat, Alta.; 1902 to Jan., 1903, Locomotive Foreman, C.P.R., Brandon, Man.; Jan., 1903, to June, 1908, Locomotive Foreman, Canadian Northern Ry., Port Arthur, Ont.; June, 1908, to Jan., 1912, Assistant Master Mechanic, C.N.R., Winnipeg; Jan., 1912, to Nov., 1915, Master Mechanic, Central Division, C.N.R., Winnipeg.

William Frederick Allen, Assoc.M.Soc. C.E., General Secretary of the American Railway Association and Editor and Manager of the Official Railway Guide, died on Nov. 9 from a stroke of apoplexy, at his home in South Orange, N.J. He was born at Bordentown, N.J., in 1846 and received his education at the Protestant Episcopal Academy and the Bordentown Model School. He was first employed as a surveyor on the old Camden & Amboy (N.J.) Rd. In 1868 he became Engineer of the West Jersey Rd. He was an expert on the



W. S. Cookson,
General Passenger Agent, Grand Trunk Railway.

standardizing of railway time. In 1875 he was made General Secretary and Treasurer of the General Time Convention, which was composed of the principal trunk line railways and was represented by their general managers and superintendents. The following year he was elected Secretary of the Southern Time Convention, consisting of the leading Southern railway lines. These conventions were consolidated in 1886 and from them the American Railway Association developed.

Cecil Wray Johnston, who has been appointed Assistant General Passenger Agent, G.T.R., Montreal, was born at Actonvale, Que., July 27, 1879, and entered G.T.R. service Sept. 1, 1897, since when he has been, to Mar. 8, 1900, operator and agent at Richmond, Que.; Berlin, Ont.; Island Pond, Vt., and Sherbrooke, Que., consecutively; Mar. 9, 1900, to June 21, 1901, clerk to Auditor of Freight Accounts, Montreal; June 22, 1901, to June 25, 1902, ticket clerk, Montreal; June 26, 1902, to Dec. 31, 1904, Travelling Passenger Agent, Montreal; Jan. 1, 1905,

to Feb. 15, 1907, excursion clerk, General Passenger Agent's office, Montreal; Feb. 16, 1907, to May 10, 1909, Travelling Passenger Agent, Montreal; May 11, 1909, to Jan. 31, 1912, chief clerk, General Passenger Agent's office, Grand Trunk Pacific Ry., Winnipeg; Feb. 1, 1912, to May 25, 1913, chief clerk, Assistant Passenger Traffic Manager's office, G.T.R., Montreal; May 26, 1913, to Feb. 15, 1914, chief clerk, Passenger Traffic Manager's office, Montreal; Feb. 15, 1914, to Nov. 13, 1915, Assistant to Passenger Traffic Manager, Montreal.

W. P. Hinton, who has been appointed Traffic Manager, Grand Trunk Pacific Ry. and Grand Trunk Pacific Coast Steamship Co., and also Western Traffic Manager, Canadian Government Railways, Winnipeg, and whose portrait appears in this issue, was born at Hintonburg, Ont., Aug. 30, 1871, and entered railway service, May 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, 1901 to Jan. 30, 1903, 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 G.T.P.R., Montreal.

Railways and the Operation of the Quebec Bridge.—E. J. Chamberlin, G.T.R., replying to a communication from the Quebec Board of Trade, Nov. 4, respecting the use of Quebec terminals by railways operating south of the St. Lawrence, stated that such a matter could hardly be considered seriously until it had been determined what the position of the Dominion Government would be relative to the use of the Quebec bridge when completed. When this had been settled it would then be for the railways concerned to consider whether it would be profitable for them to cross the river or not. At a subsequent meeting of the Board of Trade, the Secretary was instructed to write the Department of Railways and Canals with a view to ascertaining what fees would be charged railways for the use of the bridge. Pending this information, it is understood that no steps regarding terminal facilities in Quebec will be undertaken by any of the railways referred to.

The June Mechanical Conventions.—At a meeting of the executive committees of the American Railway Master Mechanics' Association and the Master Car Builders' Association, at Chicago, Ill., Nov. 15, it was decided that the next conventions will be held at Atlantic City, N.J., the Master Car Builders' Association meetings commencing June 14, and the American Railway Master Mechanics' Association meetings June 19. There is a possibility that some future conventions will be held at Chicago.

The C.P.R. has adopted a service badge for passenger trainmen. Passenger conductors are given one gold bar for 15 years' service, and an additional bar for every additional five years of service. Other trainmen and uniformed employes are given silver bars for the same number of years service. Sleeping car conductors are given the first gold bar for 10 years service.

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

Alberta and Great Waterways Ry.—In an interview at Edmonton, Nov. 1, the President, J. D. McArthur, is reported to have stated that the work done on this line during this year includes 160 miles of grading, which takes the line practically to Fort McMurray. Track laying is being gone on with, and it is expected to have the 160 miles ready for operation early next spring. A train service is in operation to Lac La Biche, mileage 124, and Fort McMurray is at about mileage 300 from Edmonton. (Nov., pg. 457.)

Burrard Inlet Tunnel and Bridge Co.—Application is being made to the Dominion Parliament for an extension of time for the commencement and completion of this projected bridge over the North Arm of Burrard Inlet with railway and tunnel connections. E. T. Cockerell, North Vancouver, B.C., is Secretary of the company. (Nov., pg. 437.)

Canadian Pacific Ry.—A press report stating that a contract had been let to the Foundation Co., Montreal, for the construction of a bridge at Darling, on the Toronto-Sudbury line, 114.8 miles from Toronto, at a cost of about \$50,000, was mentioned in Canadian Railway and Marine World for November. We are advised that there is nothing new in the report. Last spring the Foundation Co. was awarded a contract for building the substructure of Shaw's Creek Bridge, near Darling, which work has been finished for some time, the erection of the superstructure being left over until some future date.

The extension of the line easterly from Foremost, Alta., now under construction, will carry the line to about 10 miles from Lake Pakowski, and will leave a gap of about 44 miles to connect with the present western end of steel at Allawan, Sask. This line is generally known as the Weyburn-Lethbridge line.

Dredging is reported to have been started between sheds 3 and 4 at the quayside, Vancouver, to deepen the basins so as to allow ocean going steamships to go alongside the electric crane when taking on heavy machinery or other heavy cargo. (Nov., pg. 437.)

Central Canada Ry.—R. Douglas, an engineer of the Alberta Railways Department, returned to Edmonton, Nov. 4, after making an inspection trip over this line, under construction from McLennan, on the Edmonton, Dunvegan and British Columbia Ry., to Peace River Crossing. The line is about 50 miles long, and grading is reported completed with the exception of a small cut near Peace River Crossing. The cut was being blasted when Mr. Douglas was there, owing to frost having set in, and it was expected to have the grading finished in a fortnight thereafter. Track had been laid to mileage 37 from McLennan, and was expected to be laid to the crossing early in December. The plans for the building of a permanent bridge at the crossing of the Hart River, mileage 40, are under consideration, but no plans, we are officially advised, have been prepared for the crossing of Peace River. Timothy and Riley are the grading contractors. (Oct., pg. 392.)

Dominion Government Railway to Hudson Bay.—We are officially advised that grading has been completed to mile 378, from Pas. Man., leaving 46 miles more to be completed to Port Nelson the terminus on Hudson Bay. Track has been laid to mileage 241, at the Manitou rapids of the Nelson River. Ballasting has been completed to mileage 150, and surfacing to mileage 220. A considerable amount of team filling has been done

during the year. The telegraph line is completed to mile 223, and water tanks have been erected to mile 214. The weather conditions during the whole season have been good, and a very satisfactory amount of work has been done.

The steel bridge which is being erected at the Manitou rapids of the Nelson River is of the anchored cantilever type. It consists of three piers and two abutments of concrete, which were completed in October. A start has been made with the erection of the steel, and the work will be carried on throughout the winter. J. W. Porter, is Chief Engineer.

We are officially advised that the Manitoba Railways Department has not heard of any suggestion being made that it should undertake the building of a line from Pas to some recent gold discoveries in northern Manitoba. (Nov., pg. 437.)

Edmonton, Dunvegan and British Columbia Ry.—Grading between Smokey and Spirit Rivers is reported to have been completed, about 60 miles having been done this year. Track laying is not expected to be completed until Mar., 1916.

The Board of Railway Commissioners has authorized the building of a bridge over the Smokey River for which a contract has been let to the Dominion Bridge Co. The bridge, which will have a total length of 1,100 ft., will consist of two spans of 86 ft. each, six spans of 128 ft. each, and one through span of 125 ft. Work on erecting the steel is expected to be begun in January, and to be completed in April next.

R. Douglas, an engineer connected with the Alberta Railways Department, returned to Edmonton Nov. 4, after an inspection of the line, and of the Grande Prairies branch. He is reported to have said that grading for the entire 60 miles had been completed, with the exception of some connecting strips in the Saddle Mountains district, between mileage 19 and 30. He expected that grading would be entirely completed by Dec. 1. The track is not expected to be laid until next spring. G. H. Webster, of Calgary, is contractor for grading. (Nov., pg. 437.)

Grand Trunk Ry.—The Owen Sound, Ont., Town Council has granted permission for the laying of a siding along the West Esplanade to William Kennedy and Son's works.

Permission has been granted by the Goderich, Ont., Town Council for the extension of the siding at the North American Chemical Co.'s premises, Maitland Road. (Nov., pg. 437.)

Grand Trunk Pacific Ry.—The Board of Railway Commissioners has approved revised location of the branch line from Biggar, Sask., to Calgary, Alta., through the s. e. $\frac{1}{4}$ sec. and n. $\frac{1}{2}$ sec. tp. 35, range 17, west third meridian, Sask. This branch is in operation from Biggar to Loverna, 105 miles.

The Saskatoon city council has advised the company's officers that while it will be very glad to see the G.T.P.R. have an entrance to the new Union Stockyards, it must make its own arrangements with the C.P.R. and the Canadian Northern.

The Pacific Northern and Omineca Ry., the charter of which is owned by the G.T.P.R., is applying to the Dominion Parliament for an extension of time for the building of its projected railway from Kitimat Inlet on the Pacific Coast, to Hazleton on the Skeena River, then to the northern boundary of British Columbia at Teslin or Otter Lake; and from Hazleton easterly to the Peace River Pass, and on to Edmonton, Alta. (Nov., pg. 437.)

Great Northern Ry. (U.S.A.)—During the year ended June 30, there has been constructed at the Winnipeg terminal of the Midland Ry. of Manitoba (one of the G.N.R. controlled lines in Canada), a five unit fruit warehouse, each unit being 67 x 80 ft.; a loading platform 10 x 40 ft., and there have been laid various additional industrial tracks with a total length of 1.13 miles.

Alderman Gale was informed at the Vancouver City Council Railways Committee meeting, Nov. 4, that nothing had been done in the way of preparing plans for the station, as directed by the Board of Railway Commissioners, except so far as preliminary strides were concerned. The committee decided to wait until Dec. 1 before taking any further action. (Oct., pg. 392.)

The designs for the new passenger station for the G.N.R. and the Northern Pacific Ry., were submitted to the Vancouver city council, Nov. 7, and approved. The plans were prepared by F. L. Townley, and show an L shaped building, having a frontage of 228 ft. on Park Lane, with a depth of 60 ft., while the L will be 40 x 130 ft. The building will be of reinforced concrete on pile foundations, faced with a granite base and terra cotta brick. The front portion of the building will consist of a main waiting room 60 x 100 ft., flanked by two wings two storeys high. In the lower portion of these wings will be waiting, immigration, telegraph, telephone and stationmaster's offices, and a large exhibition room. The operating and traffic staffs will be accommodated in the upper storeys, the G.N.R. occupying one wing and the N.P.R. the other. In the L there will be baggage, express and mail rooms, and on the east side running the whole length of the building there will be a concourse 28 ft. wide, with glass roof, giving access to 11 sets of tracks, each of which will have an umbrella connecting with the roof of the concourse. A private road will run by the side of the L for the baggage and express traffic, and another road will give access to the waiting room. There will be two entrances to the front of the building. The building will be erected on a part of the reclaimed False Creek flats.

The detail plans are in course of preparation, and it is reported that contracts for the erection of the building will be placed at an early date.

The plans were given consideration by the Vancouver City Council's bridges and railway committee, Nov. 11, and approved, the committee asking the company to let the contracts at once, and to set back the main front 100 ft. back from the Park Lane street line. The city council had the plans before it, Nov. 15, but declined to take any action beyond deciding to forward copies of the plans to the Board of Railway Commissioners and to the Provincial Government, and concurring in the resolution of the bridges and railway committee to have the building set back 100 ft. from the Park Street line, so as to make it conform with the Canadian Northern Pacific Ry. proposals.

A. H. McNeill, K.C., counsel for the company, submitted the following statement regarding the sums the company proposed to expend as estimated by F. L. Townley, the architect: Foundations, pile and concrete, \$30,000; station building, \$268,699; heating, \$25,000; boiler house, \$10,000; pipe tunnel, \$5,000; marquise and concourse, \$15,000; umbrella shed and platforms, \$42,000; architect's fees, superintendence and incidentals, \$25,000; making a total of \$421,000. To this must be added the cost of paving the driveways, \$12,000; tracks, including switches,

\$44,000; commissary and car supply building, \$15,000; filling, \$175,000; engine house, \$25,000; engineering, superintendence, administration, etc., \$24,000; a grand total of \$716,000. Freight sheds would cost an additional \$100,000; team tracks, another \$100,000; and additional tracks and switches, to make up eleven in all, \$105,000. These sums total \$1,021,200.

We were officially advised, Nov. 18, that the plans have to be approved by the Board of Railway Commissioners before anything further can be done. (Oct., pg. 392.)

Greater Winnipeg Water District Ry.—A project is under consideration in Winnipeg for the promotion of settlement along the route of this railway from St. Boniface to Indian Bay, Lake of the Woods. The line is owned by the City of Winnipeg, and the cooperation of the Dominion and Manitoba Governments is being sought in the proposed plan. The railway was built to facilitate the construction of the new water supply works for Winnipeg, and it is hoped by this means to make the line a permanent revenue producing one, and to aid in solving the unemployment difficulty.

Intercolonial Ry.—The passenger station at Levis, Que., which was burned some time ago, will not be rebuilt before next year.

A press report states that the survey work which has been in progress all summer between Truro, N.S., and Painssec Jct., N.B., will be completed by the end of the month. The reconnaissance survey was made last year by Engineer Clarke, who has had charge of the three location parties working this year. The result of the survey is said to give a 0.5% gradient one way and a 0.6% gradient the other, compensated for curvature. The press report says: "The line of the survey goes up the North River from Truro and crosses the Cobequids at the Earltown Lake, the lowest summit in the range. This point of crossing is about 250 ft. below Folliegh Lake, where the crossing is made by the present line. From the Earltown Lake point it passes to New Annan and then past the west end of Mattattall Lake, near Wentworth. After that it follows the ridge east of Wallace River down to a crossing at Carr's Mill Bridge, and thence to Pugwash Junction. After crossing the Pugwash River at some point not yet indicated, the survey line would pass Port Phillip and go, close to the shore, to Baie Verte and across country to Painssec Junction.

We are officially advised that the following contracts have been let since the last ones announced in Canadian Railway and Marine World:—Diversion at mileage 11 from Moncton, to join the I.R.C. with the National Transcontinental Ry., J. W. McManus & Co., Moncton; coal handling plant at Levis, Que.; foundations, Lynch, Peckham and Gorham, Cape Tormentine, N.B.; machinery, Williams and Wilson, Montreal; substructures of four bridges in the vicinity of Fredericton, N.B., R. C. Sutherland, Ot-substructures of four bridges in the vicinity of Sydney, N.S., Jones and Girouard, Ottawa; filling of nine bridges in vicinity of Mulgrave, N.S., G. W. Jowitt & Co., Mauderville, N.B.

The subway under the tracks at Main St., Moncton, N.B., is reported to be completed, and was expected to be ready for street car traffic by the end of November. About 15,000 cubic ft. of earth were excavated. Directly in the centre the ground was excavated to a depth of 13 ft., while the tracks were raised some 5 ft. and graded accordingly on both ends. Some 25 cars of cement, 175 cars of gravel, 10 scow loads of sand, 25 cars of sand, 100,000 ft. of lumber and about 50 kegs of nails were used, besides considerable other material. The excavation and concrete work was done by Soper and Mc-

Dougall, Limited, Ottawa, and the steel work by Rhodes, Curry & Co., Amherst, N.S.

We are officially advised that the construction of the spur line at Bathurst, N.B., is well advanced and should be completed at an early date.

Referring to the press report as to surveys between Truro, N.S., and Painssec Jct., N.B., we are officially advised that they have not yet been completed, and that no official information respecting the gradients, etc., is at present available.

In connection with the branch line from Sunny Brae to Mulgrave, N.S., we are officially advised that no construction has been done this year.

The two last items refer to what Sydney, N.S., papers describe as a new route between Moncton, N.B., and Sydney, N.S., upon which it says the year's survey work has just been completed. A cutoff from the Truro-Painssec Jct. line starts, says the report, at Kempton, and joins the present Truro-Sydney line east of the union station; the line from Ferrona Jct. to Sunny Brae may be used as a part of the route. Two or three routes have been surveyed in Guysboro county, and the report says the route thought most likely to be adopted will be one terminating on the waterfront at Milford, eight miles east of Mulgrave, the present point of crossing to Cape Breton Island. The new route on the island is said to run through St. Peter, to Gabarus and Louisburg. The press report concludes: "Not only has the field work of the survey been all completed, but the plans of bridges which would be necessary on the new line have been finished as well as plans for the ferry docks, etc., at the Strait of Canso."

In an interview at Montreal, Nov. 5, F. P. Gutelius, General Manager, is reported to have said that although little second track work has been done during this year, about 10,000 tons of new steel have been laid on the main line. About 20% of the main line mileage is now laid with 85 lb. steel, and the remainder with 80 lb. steel. The bridges between Montreal and Halifax are now capable of carrying trains drawn by the heaviest locomotives. The most important of the new bridges constructed is that over the Grand Narrows, on the line to Sydney, N.S., which has been raised 6 ft. About half the station buildings have been repainted, and the remaining half will be done next year. (Nov., pg. 437.)

Kettle Valley Lines.—The last spoke on the Coquehalla valley section, which connects up the line with the C.P.R. at Hope, B.C., was expected to have been driven by Nov. 30, and it is hoped to have the line opened for traffic early next spring.

The elevation of the Coquihalla Summit is 3,300 ft. above sea level, and the gradient westerly is 2.2%, while that going easterly is 1%. On the easterly side of the summit the last station is named Juliet, while the first station west of the Summit is Romeo, and all the other stations down the valley to Hope are named after Shakespearean characters. Near Romeo is the large steel bridge erected over Slide Creek, while between it and Boston Bar Creek, the snow sheds are being erected. The permanent steel bridge at Ladner Creek is reported to be practically completed. The general contractors of this section of the line were McArthur Bros., New York; the bridge superstructures were erected by the Dominion Bridge Co., and the snow shed contract is being carried out by Guthrie & Co. A. McCullough is Chief Engineer. (Nov., pg. 437.)

National Transcontinental Ry.—Negotiations are reported to be in progress for the taking over by the Dominion Government of the Quebec and Saguenay Ry., a partially constructed line owned by the Quebec Ry., Light and Power Co. The Canadian

Northern Ry. has been reported to have also had some negotiations for taking over the line. The Minister of Railways went over the line recently in company with F. P. Gutelius, General Manager, Canadian Government Railways, and a press report states that track laying and ballasting will be gone on with at once, and the line from the junction with the Q. Ry., L. and P. Co.'s line to Murray Bay got ready for operation by the end of the year. These reports have been so frequent for the past three years or so without anything resulting, that the present statements may be classed as merely a rumor.

We are officially advised respecting the projected pulp mill at Neelands, Ont., that D. Chisholm, who is in control of the project, has let contracts for clearing and grading at the site. The railway officials have not yet started the work of laying the necessary spur track. Neelands is about 30 miles west of Cochrane, the junction point with the Timiskaming and Northern Ontario Ry., and the spur line will be about three miles long. (Nov., pg. 437.)

Pacific Great Eastern Ry.—Track is expected to be laid early in December to Clinton, B.C., about 166 miles from Squamish, the Howe Sound terminus of the line, and about 40 miles beyond Lillooet, to which point a train service is in regular operation.

The company is applying to the North Vancouver City Council for a renewal of a lease of land upon which it has a Y for turning its cars. The city passed a resolution, Nov. 2, granting a two years extension of the lease on condition that the company assist the city in obtaining title from the Government to certain foreshore properties. (Oct., pg. 392.)

Roberval and Saguenay Ry.—The Quebec Legislature is being asked to extend the time for the building of the projected railway from Roberval on the Quebec and Lake St. John Ry., running round Lake St. John to the Peribonka River, and thence south easterly to the Q. & L. St. J. Ry., near Jonquiere, with a branch line to St. Bruno; and for the completion of the lines of the Ha Ha Boy Ry., acquired by the R. & S. Ry., and especially the projected branch line to the St. Maurice River.

St. John and Quebec Ry.—D. F. Maxwell, Engineer of Railways for New Brunswick, has made a report to the Provincial Government upon the strata found upon boring tests made at the Mistake, on St. John River, and at Perry's Point, on the Kennebecasis River, at which place it is proposed to build bridges on this railway. It is said that the tests show that suitable foundations can be secured for the bridges at such points on the line as originally routed by the surveys made under his direction. The report was considered at a meeting of the Cabinet held Nov. 4.

The question of the completion of the line, which has been taken over by the Provincial Government, is under consideration by the Cabinet. (Oct., pg. 393.)

PACIFIC NORTHERN AND OMINECA RAILWAY COMPANY.

NOTICE is hereby given that the Pacific Northern and Omineca Railway Company will apply to the Parliament of Canada, at the next session thereof, for an Act extending the time within which it may proceed to construct, complete and put into operation the lines of railway which it was authorized to construct by chapter 90 of the statutes of 1902, as amended by chapter 141 of the statutes of 1906, and for other purposes.

Dated at Montreal, this 3rd day of November, A.D. 1915. W. H. BIGGAR,
Solicitor for the applicants.

Traffic Orders by the Board of Railway Commissioners.

Gravel Weights on Michigan Central Rd.

24381. Oct. 29. Re application of Hagersville Contracting Co., Ltd., complaining against maximum and minimum weights on carloads of gravel shipped over St. Clair Division, Michigan Central Rd.: It is ordered that the M.C.R. publish forthwith a supplement to its Tariff, C.R.C. no. 1743, embodying the following rule, viz.: "The minimum weight on traffic destined to the St. Clair Division of the Michigan Central Rd. will be 50,000 lbs., unless the marked capacity of the car is less, in which case the marked capacity of the car, but not less than 40,000 lbs., will be the minimum; and on traffic destined to points on the St. Clair Division the total weight of the car and contents must not exceed 100,000 lbs.

Perishable Freight in Heated Cars.

24385. Oct. 28. Re order 23392, Mar. 4, 1915, directing the C.P.R. to accept shipments of perishable freight for carriage in heated cars between points west of Port Arthur, Ont., upon the terms and conditions set forth in the order. Upon its appearing that the said order was not limited, in the terms of the judgment, to less than carload shipments as intended: It is ordered that the same be, and it is hereby amended as follows, viz.: By adding after the figures "16" in the 6th line of the recital to the order the words, "applying to lines west of Port Arthur, Ont.,"; and adding after the word, "accept," and before the word, "shipments," in the second line of the operative part of the order, the words, "less than carload." And it is further ordered that orders 23860, June 16, 1915; 23997, July 22, 1915, and 24132, Aug. 28, 1915, approving forms of Release and Responsibility Special Contract of and Canadian Northern Railway Companies, and Canadian Northern Railway Companies, respectively, be so interpreted.

Application for Freight Refund Refused.

24400. Nov. 4. Re complaint of A. H. Mayland, of Calgary, Alta., against extra freight charged by C.P.R. on a shipment of hogs to Gordon, Ironsides & Fares, of Moose Jaw, Sask., the shipments in question having been through billed with allowance made for diversion charge. Upon hearing the complaint at Calgary, June 9, the applicant being present at the hearing, and upon the report of the Traffic Officer of the Board, it is ordered that the complaint be dismissed.

Charge on Cars Awaiting Furtherance Orders at Cartier.

24436. Nov. 11.—Re application of Canadian Pacific Ry. for an order rescinding order 6147, Jan. 21, 1909, as amended by order 10100, Mar. 15, 1910; and for authority to make an extra charge for cars remaining on hand at Cartier, Ont., awaiting furtherance orders, after the expiration of 72 hours from time of arrival: Upon hearing the application in Montreal, Jan. 29, 1915, and in Ottawa, Sept. 21, 1915, the Dominion Millers and the Montreal Corn Exchange Associations, the Canadian Pacific, Grand Trunk, and Canadian Northern Railway Companies, and the Montreal and Toronto Boards of Trade being represented at the hearing, and upon the report and recommendation of the Chief Traffic Officer of the Board—it is ordered that the applicant company be authorized to publish and file a tariff to provide for the charging of special tolls for detention of cars containing western grain and grain products at Cartier for more than 72 hours while awaiting furtherance orders from the consignees thereof, as follows, namely: \$1 a car per day of 24 hours, or part thereof, for the first two days

following the expiration of the said 72 hours, and \$2 a car per day of 24 hours for each succeeding day, or part thereof; the said tolls to be chargeable in addition to the ordinary demurrage toll prescribed by order 906, Jan. 25, 1906, and the stopover charge as fixed by order 6147, Jan. 21, 1909, as amended by order 10100, Mar. 15, 1910.

Suspension of Import Tariffs.

24440. Nov. 16.—Re application of Toronto Board of Trade for an order suspending Canadian Pacific Ry. Tariff, C.R.C. no. E-3060, published to become effective Dec. 1, containing increased rates on import merchandise from St. John and West St. John, N.B., to stations and connections: Upon reading what has been filed in support of the application, the Canadian Pacific and Grand Trunk companies consenting to the suspension of the tariffs hereinafter set forth, it is ordered that C.P.R. Import Tariff, C.R.C. no. E-3060, from St. John and West St. John, N.B., and G.T.R. Import Tariff, C.R.C. no. E-3280, from Portland, Me., be suspended until further order.

Shipments of Beer in Heated Cars.

24459. Nov. 20. Re order 23392, Mar. 4, 1915, made upon complaint of Fernie-Fort Steele Brewing Co., Ltd., directing the C.P.R. to accept shipments of such perishable freight as beer, fruit, and vegetables, for carriage in heated cars to its stations on such day or days of each week as are duly announced for the service by the company, subject to the conditions set forth in the order. Upon reading what is filed by the Calgary, Brandon, Winnipeg, Swift Current, Regina, and Moose Jaw Boards of Trade, the Early Fruit Co., Ltd., the Scott Fruit Co., the Northern Fruit Co., and the British Columbia Fruit Growers' Association, it is ordered that order 23392 be amended to provide that the "release" therein mentioned apply only to shipments of beer, in less than carload quantities, on railways west of Lake Superior. That orders 23860, June 16, 1915; 23997, July 22, 1915, and 24132, Aug. 28, 1915, approving forms of release of responsibility special contract of Canadian Pacific, Grand Trunk Pacific, and Canadian Northern Railways, respectively, be rescinded.

Refrigerator Car Rates for Vegetables.

General order 152, Nov. 2. Re application of Toronto Board of Trade for an order disallowing the following schedules to apply on carload shipments of vegetables when loaded in refrigerator cars, namely, Supplement 5 to G.T.R. Tariff C.R.C. no. E12859 Supplement 15 to C.P.R. Tariff C.R.C. no. E-2715, and Supplement 2 to Canadian Northern Ry. Tariff C.R.C. no. E-386: It is ordered that the railway companies which supply refrigerator cars, at the request of the shippers, for the carriage of vegetables in carload lots, may publish and file tariffs providing for the following maximum tolls for the use of the said cars, to be charged in addition to the tolls published and filed for the same movements in ordinary box cars, viz.: For any distance not exceeding 300 miles, \$3 a trip. For any distance over 300 miles, but not exceeding 500 miles, \$5 a trip. For any distance over 500 miles, but not exceeding 750 miles, \$6 a trip. For any distance over 750 miles, but not exceeding 1,000 miles, \$7.50 a trip. For any distance over 1,000 miles, \$10 a trip. Provided that the maximum toll between any two points, both of which are east of the Detroit and St. Clair Rivers, the Georgian Bay and Sudbury, Ont., including Sudbury, also between any two points both of which are west of Port

Arthur, inclusive, do not exceed \$7.50 a trip. And it is further ordered that any existing schedules in conflict with this order be disallowed.

Changes in Canadian Freight Classification to be Approved Before Becoming Effective.

General Order. 153. Re sec. 321 of the Railway Act and orders dated Mar. 3, 1904, and Jan. 18, 1909, it is ordered as follows:

1. That any proposed new issue of the Canadian Freight Classification, or any proposed supplement to the issue then current, be submitted in printed proof form for the approval of the Board before it be made effective.

2. That should such proposed new issue or supplement remove any goods from a lower to a higher class, or in any way increase the amount to be paid for carriage, notice of the submission thereof be published in the two next succeeding issues of the Canada Gazette, in the following form:

"Notice is hereby given that the Canadian Freight Association did, on the day of 19...., submit to the Board of Railway Commissioners for Canada, for its approval, Canadian Freight Classification no. (or Supplement no. to Canadian Freight Classification no.)"

3. That the said proof show and include—

(a) Under the heading of "Additions," articles not previously classified and the proposed ratings therefor, also new rules or regulations which it is proposed to add to the Classification.

(b) Under the heading "Changes," proposed increased or reduced ratings, or changes in the existing rules or regulations, and in a parallel column those previously approved by the Board.

4. That the application to the Board be accompanied by—three copies of the said proof; the reasons, fully stated in manuscript, for proposed changes involving increased transportation charges; a copy of the notice furnished to the King's Printer for publication in the Canada Gazette.

5. That at the same time one copy of the said proof, also of the said notice for publication, be furnished to the following bodies, with the request that fully explained objections, if any, to proposed changes involving increased transportation charges be filed with the Board of Railway Commissioners within 30 days from the receipt of the said proof and notice:—Canadian Manufacturers' Association, Ontario Grocer's Guild, Fruit Growers' Association of Ontario, Montreal Chamber of Commerce, Boards of Trade of Belleville, Berlin, Ont., Brandon, Man., Brantford, Brockville, Ont., Calgary, Alta., Chatham, Collingwood, Cornwall, Ont., Edmonton, Alta., Fort William, Ont., Fredericton, N.B., Galt, Guelph, Ont., Halifax, N.S., Hamilton, Kenora, Kingston, Ont., Lethbridge, Alta., London, Ont., Medicine Hat, Alta., Montreal, Que., Nelson, B.C., Ottawa, Owen Sound, Peterboro, Port Arthur, Preston, Ont., Prince Albert, Sask., Prince Rupert, B.C., Quebec, Que., Regina, Sask., St. Catharines, Ont., St. Hyacinthe, Que., St. John, N.B., St. Thomas, Sarnia, Ont., Saskatoon, Sask., Sherbrooke, Que., Stratford, Ont., Three Rivers, Que., Toronto, Ont., Valleyfield, Que., Vancouver, Victoria, B.C., Waterloo, Windsor, Ont., Winnipeg, Man., Woodstock Ont., also to the railway companies which are not members of the Canadian Freight Association.

Classification of Cream Pasteurizers.

General Order 154, Nov. 10. Re application of C. Richardson & Co., St. Mary's, Ont., for a reduction in classification of cream pasteurizers, in less than carload lots. It is

ordered that, pending a revision of the present Canadian Freight Classification, railway companies are directed forthwith to publish and file commodity tariffs, to apply between all points in Canada, covering the following, namely:

Cream or milk aerators, agitators, coolers, forewarmers, heaters, pasteurizers, separate or combined	L.C.L.
Loose or on skids	1½
In boxes or crates	1

Charge for Cleaning Live Stock Cars.

General Order 155, Nov. 15. Re general order 147, July 29, 1915, granting permission to railway companies to charge not exceeding 75c. for cleansing and (or) disinfecting any car in which live stock has been carried when the work is done by the railway companies; and that the said toll may lawfully

be an addition to the charges, as published in the companies' tariffs, for transportation of the live stock unloaded from the said cars. Upon its appearing that there is some misunderstanding as to the scope of the order as embodied in the tariffs filed; and that some of the railway companies at least are of opinion that the order authorized a charge for cleaning as distinct from disinfecting, it is ordered that the railway companies publish and file amended tariffs showing a toll not exceeding 75c. for cleaning and disinfecting, or disinfecting any car in which live stock has been carried when the work is done by the railway companies; the tariffs to carry a notation that the charge is to apply when, on account of Federal, provincial or municipal regulations, it is necessary to do the work in question.

Birthdays of Transportation Men in December.

Many happy returns of the day to:—

E. T. Agate, M.Can.Soc.C.E., ex District Engineer, Canadian Northern Ontario Ry., Sudbury-Port Arthur Line, now of Pittsford, N.Y., born there, Dec. 7, 1874.

J. H. Barber, M.Can.Soc.C.E., Engineering Department, C.P.R., Montreal, born at Cobourg, Ont., Dec. 20, 1856.

O. C. Bishop, Superintendent, Sleeping and Dining Cars and News Service, Canadian Northern Ry., Winnipeg, born at Escanaba, Mich., Dec. 10, 1876.

N. E. Brooks, M.Can.Soc.C.E., Engineer of Maintenance of Way, Western Lines, C.P.R., Winnipeg, born at Sherbrooke, Que., Dec. 25, 1866.

Harold Browning, steamship agent, etc., Windsor, Ont., born at Stamford, Lincolnshire, Eng., Dec. 2, 1864.

W. W. Butler Vice President, Canadian Car and Foundry Co., Montreal, born at Danville, Ohio, Dec. 9, 1862.

J. M. Cameron, General Superintendent, Alberta Division, C.P.R., Calgary, born at Lochabar, N.S., Dec. 18, 1867.

M. M. Campbell, Building Inspector, G.T.R., Montreal, born at Bridgeton, N.B., Dec. 17, 1879.

W. C. Casey, General Agent, Passenger Department, Atlantic Steamship Lines, C.P.R., Winnipeg, born at Moncton, N.B., Dec. 12, 1882.

A. H. Chave, Purchasing Agent and Assistant to First Vice President, Canadian Car and Foundry Co., Montreal, born at Williamsbridge, N.Y., Dec. 26, 1872.

W. H. Gardiner, City Freight Agent, C.P.R., and District Freight Agent, Esquimalt and Nanaimo Ry., Victoria, B.C., born there Dec. 6, 1859.

H. H. Gildersleeve, Manager, Northern Navigation Co., Sarnia, Ont., born at Kingston, Ont., Dec. 15, 1865.

A. S. Goodeve, member Board of Railway Commissioners for Canada, born at Guelph, Ont., Dec. 15, 1860.

A. J. Gorrie, Superintendent, District 1, National Transcontinental Ry., Quebec, born at Raith, Kirkcaldy, Scotland, Dec. 10, 1868.

W. H. Grant, Manager of Construction, Mackenzie, Mann and Co., Ltd., Toronto, born at Acton, Ont., Dec. 8, 1858.

F. P. Gutelius, M.Can.Soc.C.E., General Manager, Canadian Government Railways, Moncton, N.B., born at Mifflinburg, Pa., Dec. 21, 1864.

Jas. H. Hall, President, Western Transportation Co., Ltd., Ottawa, Ont., born at Hawkesbury, Ont., Dec. 20, 1863.

D. B. Hanna, Third Vice President, Canadian Northern Ry., Toronto, born at Thornliebank, Scotland, Dec. 20, 1858.

J. J. Hennigar, Agent Great Lakes Trans-

portation Co., Windsor, Ont., born at Topeka, Kan., Dec. 21, 1884.

E. W. Holton, General Passenger Agent, Northern Navigation Co., Sarnia, Ont., born at Belleville, Ont. Dec. 15, 1872.

A. J. Isbester, Assistant District Engineer, Port Arthur District, Canadian Northern Ry., Port Arthur, Ont., born at Ottawa, Dec. 18, 1879.

R. Johnson, Assistant Locomotive Foreman, C.P.R., Hochelaga, Montreal, born at Quebec, Que., Dec. 24, 1863.

S. R. Joyce, Travelling Passenger Agent, G.T.R., Toronto, born at Napanee, Ont., Dec. 15, 1887.

J. T. McGrath, ex-Superintendent of Motive Power and Equipment, Chicago and Alton Rd., Bloomington, Ill., born at Toronto, Dec. 6, 1869.

A. T. McKean, City Freight Agent, C.P.R., Winnipeg, born at St. John, N.B., Dec. 18, 1886.

A. E. Macdonald, General Claims Agent, Canadian Northern Ry., Winnipeg, born at Woolwich, Eng., Dec. 11, 1870.

L. Macdonald, Division Freight Agent, G.T.R., Toronto, born at Montreal, Dec. 10, 1871.

A. D. MacTier, General Manager, Eastern Lines, C.P.R., Montreal, born at Blairgowrie, Scotland, Dec. 27, 1867.

J. C. O'Donnell, Superintendent, District 3, Western Division, Canadian Northern Ry., Edmonton, Alta., born at Cobden, Ont., Dec. 17, 1879.

S. R. Payne, General Manager, Ottawa and New York Ry., Ottawa, Ont., born at Jefferson, Ohio, Dec. 21, 1865.

A. Price, Assistant General Manager, Eastern Lines, C.P.R., Montreal, born at Toronto, Dec. 6, 1861.

W. J. Radford, Assistant to General Manager, Toronto Suburban Ry., Toronto, born at Boldre, Hampshire, England, Dec. 23, 1870.

G. D. Robinson, Assistant Export and Import Freight Agent, C.P.R., Toronto, born at St. John, N.B., Dec. 7, 1877.

Collingwood Schreiber, C.M.G., Hon. Mem. Can.Soc.C.E., General Consulting Engineer to Dominion Government, Ottawa, Ont., born at Bradwell, Essex, Eng., Dec. 14, 1831.

M. F. Tompkins, Division Freight Agent, Intercolonial Ry., Halifax, N.S., born at Margaree, N.S., Dec. 6, 1878.

C. E. E. Ussher, Passenger Traffic Manager, C.P.R., Montreal, born at Niagara Falls, Ont., Dec. 29, 1857.

H. H. Vaughan, M.Can.Soc.C.E., Consulting Engineer, C.P.R., Montreal, born at Forest Hill, Essex, Eng., Dec. 26, 1868.

R. C. Vaughan, Assistant to Third Vice President, Canadian Northern Ry., Toronto, born there, Dec. 1, 1883.

A. P. Walker, M.Can.Soc.C.E., Assistant Division Engineer, Ontario Division, C.P.R., Toronto, born at West Hartlepool, Eng., Dec. 9, 1860.

E. H. Wood, Division Car Foreman, Ontario Division C.P.R., Toronto, born at St. John, N.B., Dec. 30, 1880.

Railway Rolling Stock Notes.

The C.P.R. has received one second class steel passenger car from its Angus shops, Montreal.

Canadian Government Railways has ordered a 100 ton wrecking crane from F. H. Hopkins and Co.

The Canadian Northern Ry. has received 11 steel underframe standard sleeping cars from Canadian Car and Foundry Co.

Canadian Government Railways, between Oct. 18 and Nov. 16, received 362 box cars from Canadian Car and Foundry Co.; 162 box cars, from National Steel Car Co.; 95 steel flat cars from Nova Scotia Car Works, and 4 consolidation locomotives from Canadian Locomotive Co.

Proposed Charge for Checking Baggage.—

A recommendation of one of the committees of the American Association of Passenger Traffic Officers, at its recent annual meeting, was to the effect that a nominal terminal charge of 10c be made for checking baggage. Several reasons are advanced why such a charge should be made, among them being that a passenger travelling with a large trunk receives a greater service free than one who has only hand baggage, which he looks after himself and checks at the terminal for convenience; and that the companies' liability for loss of or damage to baggage has been increased.

Observation Platforms in Mountains.—

The Grand Trunk Pacific Ry. has for some time had an observation platform at mileage 1,082.5 from Winnipeg, from which passengers get a view of Mount Robson. Another observation platform has been installed 184 miles east of Prince Rupert, between Bulkeley Canyon and New Hazelton, at which train 1 stops for five minutes to let passengers see the Bulkeley Gate, the principal scenic feature of the Bulkeley Canyon. Sign posts are being erected to point out the most prominent scenic features in the mountains.

Great Northern Ry. of Canada Construction Suits.—Judgment in the appeal and cross appeal, referred to in Canadian Railway and Marine World for November on pg. 417, was given Nov. 1. The court sustained the Superior Court's judgment granting Smith, Barry and McRae \$63,886 on their claim for a balance of about \$200,000 due on the construction of the Hawkesbury-Joliette section of the line. The court further reduced the award of \$33,000 face value of original first mortgage bonds to \$24,750, and sustained the award of \$330,000 of G.N.R. stock.

Stanstead, Shefford and Chambly Ry.—

The annual meeting was held at Waterloo, Que., Nov. 18. The directors for the current year are,—G. G. Foster, President; E. J. Chamberlin, Chairman; E. C. Smith, Vice President; W. W. Chaffee, Assistant Secretary and Treasurer; E. C. Smith, G. C. Jones, G. Stevens, J. P. Noyes, Jas. Davidson and W. H. Robinson. J. H. Lefebvre is Secretary-Treasurer, and E. J. Chamberlin, E. C. Smith and G. C. Jones form the executive committee for the management of the line, which is leased to the G.T.R.

The American Railway Bridge and Building Association will hold its next annual convention at New Orleans, La., Oct. 17 to 19, 1916.

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AND
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NOTICE TO ADVERTISERS.

ADVERTISING RATES furnished on application.

ADVERTISING COPY must reach the publishers by the 10th of the month preceding the date of publication.

TORONTO, CANADA, DECEMBER, 1915.

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**Canadian Northern Passenger Service
Extended to Pacific Coast.**

Commencing Nov. 23 from Edmonton westbound and Nov. 24 from Vancouver eastbound, passenger service was established on the C.N.R. between Edmonton and Vancouver, connecting at Edmonton with the service between there, Winnipeg and Toronto. The first connecting train from the west left Toronto Nov. 19, and the first through train from Vancouver arrived in Toronto Nov. 29. The inauguration of this service marks the completion of the C.N.R. as a transcontinental line. The through service between Toronto and Vancouver consists of three trains a week each way. Train 1 leaves Toronto Monday, Wednesday and Friday at 10.45 p.m., reaching Vancouver Saturday, Monday and Wednesday at 5.30 p.m. Train 2 leaves Vancouver Friday, Sunday and Wednesday at 9 a.m., reaching Toronto Wednesday, Friday and Monday at 2.30 p.m.

The C.N.R. main line had not been operated west of Edmonton previously, except by a mixed train bi-weekly to Peace River Jct., mileage 35.7. The new timetable shows that Tollerton, 136.9 miles westerly from Edmonton, is the terminus of the Western Division. In addition to the new main line mileage brought under the operating department, the Peace River subdivision, extending from Peace River to Sangredo, 31.4, is given a bi-weekly mixed train service. The new Pacific Division extends from Tollerton, Alta., to New Westminster, 625.9 miles. This is operated in five subdivisions, viz.: Tollerton, Alta., to Lucerne, B.C., 128.9 miles; Lucerne to Blue River, 110.4 miles; Blue River to Kamloops, 142.5 miles; Kamloops Jct. to Boston Bar, 125.7 miles; Boston Bar to New Westminster, 118.4 miles.

The company's Passenger Department has issued the following information about the route: "The new line from Port Arthur to Sudbury runs through what is known as the 'Clay belt' of Northern Ontario, lying generally somewhat north of the C.P.R. line. The country adjacent to our line is well wooded, and when cleared is adaptable to general farming. The lumbering industry, which will quickly develop, will no doubt very shortly be a profitable source of revenue to the company. The traveller will find the ever changing vista of forest, river and lake a welcome change from the bare monotony of the western prairies. The Nipigon country, just east of Port Arthur, adjacent to the Canadian Northern Ry., has been celebrated for many years as the paradise of the fisherman and big game hunter. The possibilities in this respect of the line further east have not yet developed, but undoubtedly the fishing and hunting throughout the whole district from Port Arthur to Sudbury are exceptionally good. Lakes of fair size are numerous, and all abound in game fish. Big game hunting for moose, bear, deer will undoubtedly be excellent, and in fact the possibilities for sport in the line of fishing and hunting are unsurpassed anywhere on the North American continent. From Edmonton west to Vancouver the shortest route is followed to the Yellowhead Pass, where the road crosses the main ridge of the Rocky Mountains at a maximum elevation of 3,711 ft. above sea level, through the pass within a few miles of Mount Robson, the highest peak in the Canadian Rockies, 13,700 ft., thence through the low Cranberry Lake Pass, across the Canoe River and up Camp Creek to the Albrede River, which it follows from its source to its junction with the North Thompson River. The line then follows the valley of the North Thompson to its junction with the South Thompson. From

Kamloops the north shore of Kamloops Lake is followed to Savona, a distance of 40 miles. After leaving Kamloops Lake the line keeps to the valley of the Thompson River until a short distance beyond Ashcroft, crossing there to the south side, and after a short distance again to the north side, which is followed to the junction of the Thompson and Fraser Rivers at Lytton, where the river is again spanned by a heavy steel bridge, and re-crossed at Cisco to the south side. From Cisco the valley of the river is followed to New Westminster and thence into Vancouver. Until very recently the section from Kamloops to the Yellowhead Pass was practically unknown, settlement being confined to the lower part of the North Thompson. Until the Canadian Northern Ry. sent its engineers through in 1909 the trail had been previously traversed by only a few timber cruisers and prospectors, although as far back as 1862 a trip was made by Viscount Milton and Dr. Cheadle from Edmonton to Kamloops, following practically the same route as the present Canadian Northern line, two months being consumed in making the trip."

**Civil Engineers Look Over Welland
Ship Canal Construction.**

The Canadian Society of Civil Engineers, Toronto branch, held its annual excursion Nov. 5, when a number of the members, accompanied by a considerable number of under-graduates of the Faculty of Applied Science, Toronto University, went for a trip over a portion of the route of the Welland Ship Canal. The party of about 130 left Toronto at 8.10 a.m., in special cars on the G.T.R. regular train, which were detached at Merriton and run over the G.T.R. branch line to Thorold. They then walked over the work on section 3, had luncheon at a contractor's camp and walked on to Merriton, whence they were taken in Niagara, St. Catharines and Toronto Ry. cars, hauled by a Welland Ship Canal Construction Ry. locomotive, over that line to the Lake Ontario entrance of the canal at Port Weller, stopping at a number of points en route to inspect the work in progress on sections 2 and 1. Port Weller was left on special N., St.C. & T.R. cars at 5.30 p.m. over that line for St. Catharines, where dinner was taken, and Toronto was again reached at 10 p.m. The party was in charge of J. R. W. Ambrose, Chief Engineer, Toronto Terminals Ry. Co., and Chairman, Toronto branch, Can.Soc.C.E. They were met at Merriton by J. L. Weller, M.Can.Soc.C.E., Engineer in Charge, Welland Ship Canal, who spent the whole day with them going over the work, explaining many of its most interesting features and showing them every courtesy.

The canal construction has been very fully described in a number of articles in Canadian Railway and Marine World. Of the work inspected on the trip referred to, it may be mentioned that section 3 includes twin locks 4, 5 and 6, which are arranged in flight, and single lock 7, also a pair of guard gates just south of lock 7. An immense earth dam, with concrete core wall, extends from the head of the flight locks east to the escarpment and will form a pond of 84 acres. Section 2 includes locks 2 and 3, bridges 3, 4 and 5, two pond bridges, extensive water tight embankments and nearly three miles of canal prism. The new ship canal crosses the present canal on the level above lock 3. Section 1 includes the new harbor on Lake Ontario, lock 1, bridges 1 and 2 and about a mile of canal prism. The total length of the new canal will be about 25 miles and the estimated cost is \$50,000,000. The locks will be 800 x 80 ft., with a depth of 30 ft. over the sills. Each lock will have a lift of 46½ ft.

Canadian Northern Railway Construction, Betterments, Etc.

Quebec and Lake St. John Ry.—We are officially advised that the company is building under the St. Charles and Huron River Ry.'s charter a line from Lorette station up the St. Charles River Valley to Stoneham, Que., at the mouth of Huron River, 7.5 miles. The line was located about two years ago by S. S. Oliver, and the location was revised early this year by — Morrison. A contract for grading has been let to a Quebec firm and grading is being done. The principal traffic on the line will be pulpwood. (May, 1912, pg. 231.)

Canadian Northern Ontario Ry.—The Board of Railway Commissioners has authorized the building of an interchange track with the C.P.R., near Ottawa.

The coal handling plants at Rideau Jct., Hornepayne and Capreol, on the Montreal-Ottawa-Port Arthur line, were reported, Nov. 12, to be practically completed.

The Port Arthur, Ont., City Council on Nov. 9 granted the company a year's extension of time to Mar., 1917, within which to connect up its tracks from Arthur St., with the main line at Current River.

Canadian Northern Ry.—The Board of Railway Commissioners has authorized the opening for traffic of the line between Grand Marais and Birds Hill, Man., 50 miles. It was authorized to be opened temporarily in February last. An extension to Victoria Beach, 14 miles, is reported to have been graded.

We are officially advised that track has been laid on the line between Bienfait and Estevan, Sask., 8 miles. An order has been made by the Board of Railway Commissioners authorizing its opening for traffic.

The Board of Railway Commissioners has approved of revised location of a branch line through sections 3, 4 and 5, tp. 35, range 7, east 2nd meridian, Saskatchewan, mileage 83.99 to 87.71.

We are officially advised that grading is being done on the line projected from Calgary to MacLeod, Alberta.

We are officially advised that grading has been carried on this year on the line from Oliver towards St. Paul de Metis, Alta. A press report states that over 100 miles of grading will be completed by the end of the year on this line, which as at present projected will be 117 miles long.

Canadian Northern Pacific Ry.—The Minister of Railways for British Columbia has issued a certificate authorizing the opening for traffic of the line from the summit of the Yellowhead Pass, on the eastern boundary of the province, to Port Kells, 491 miles. To secure a connection with New Westminster the company acquired the Great Northern Ry.'s Port Kells branch from the southern end of the New Westminster bridge to Port Kells, 8.3 miles. These two mileages total 499.3 miles, practically agreeing with the total of 499 miles given in the table of distances from New Westminster bridge to Yellowhead, given in our Oct. issue on pg. 370. From the bridge to New Westminster and Vancouver the company's trains run on the Great Northern tracks under an agreement.

The Minister of Railways for British Columbia has approved of plans for the erection of protective shed where needed along the line to protect the track from rolling gravel and disintegrated rock.

The report that an order has been given for two car ferries is incorrect. One has been ordered and full particulars of it are given in the Marine Department of this issue.

Vancouver Terminals.—We are officially advised in connection with the terminal

work in progress at Vancouver, that the present contract covers the erection of a sea wall, located 300 ft. west of Main St. bridge, for the purpose of enclosing the head of False Creek, which is being reclaimed by the company for the purpose of its terminals. This contract has been let to A. G. Creelman and Sons, Vancouver, and covers the building of a reinforced concrete sea wall, with two slips for the accommodation of steamships. It is expected that the work can be completed in five or six months. The reclamation work on False Creek itself is being carried on by the Pacific Dredging Co., which is dredging a channel for the Dominion Government from Main St. to English Bay. The material dredged from this channel is being deposited on the False Creek flats, through a pipe line. The C.N.R. has at present an area of 64 acres, contained within a temporary bulkhead completely filled in and ready for the laying of tracks. It was intended to erect a temporary station and freight sheds on this area pending the completion of the remaining filling, and the erection of the permanent station buildings, but owing to a change in policy this work has been suspended pending negotiations being completed with the Great Northern Ry.

Lines on Vancouver Island.—Rails sufficient for the 16 miles between Victoria and Patricia Bay are reported to have been delivered, for immediate laying. Provincial Government officials are reported to have stated, Nov. 4, that the line would be ready for operation within three months; that tracklaying on the line from Victoria to Alberni would be started early next spring, and that a contract had been let for two car ferries to be operated between Patricia Bay and the mainland. The landing piers at Patricia Bay and on Lulu Island will, it is reported, be put under contract as soon as the ferry plans reach Vancouver. The connecting line with the ferry slip at Lulu Island starts off from the north end of the New Westminster bridge, follows along the North Arm, and crosses over to Lulu Island at the easterly apex of the triangle, and is then continued to road 5 near Ladner's Ferry. Steel is reported to have been laid on a portion of the line, which it is proposed to extend to the canneries at Steveston. (Nov., pg. 424.)

Vancouver Branch United Yardmasters' Association.—A branch of the United Yardmasters' Association was organized in Vancouver, B.C., No. 1, with the following officers:—President, D. Nicks, General Yardmaster, C.P.R.; Vice President, D. Robinson, General Yardmaster, Great Northern Ry.; Treasurer, R. V. Mills, Yardmaster, British Columbia Electric Ry.; Secretary, S. M. Willis, Chief Clerk, C.P.R. Yardmaster's office, Coquitlam.

The C.P.R. trains heretofore running between Lethbridge and Cardston, Alberta, are now being run through to Calgary, via MacLeod, with stopover privileges at Lethbridge. The train heretofore running between Medicine Hat and Calgary, only runs as far as Aldersyde, connecting there with the Cardston-Calgary train.

THE VICTORIA ROLLING STOCK & REALTY CO., OF ONTARIO, LIMITED.

Notice is hereby given that a dividend of three and a half per cent. on the paid-up capital stock of the Company for the half-year ended Nov. 30th, 1915, has been declared payable Dec. 1st, 1915, to the shareholders on record as of the 30th of Nov., 1915.

By order of the Board.

G. T. CHISHOLM, Secretary.

Toronto, Nov. 20th, 1915.

Alberta Public Utility Commissioners.

G. H. Bulyea, who has been appointed chairman, Alberta Public Utilities Commission, was born at Gagetown, N.B., Feb. 17, 1859, and was educated at Queens County Grammar School, Gagetown, and at the New Brunswick University, graduating B.A. therefrom in 1878. After teaching in the Sunbury County Grammar School, he moved to Manitoba in May, 1882, and in March, 1883, to Qu'Appelle, Sask., where he engaged in mercantile business. He was elected a member of the Northwest Council in 1884, and in 1898 was appointed Administrator of the Yukon District, remaining in that position only a few months. He was re-elected to the Northwest Council at the next general election, being subsequently appointed Minister of Agriculture; and in Feb., 1903, was appointed Minister of Public Works. On the creation of the province of Alberta, he was appointed Lieutenant-Governor, Sept. 1, 1895, and was re-appointed for a second term which expired recently.

J. Stocks, the second member of the commission, was born at Sherrington, Que., in 1858, and spent his younger days in the vicinity of Sherbrooke, Que. In 1881 he entered the employ of a construction company, which subsequently became merged with C.P.R. interests, and he went to the West in that service. After a couple of years as foreman of construction, he obtained promotion and subsequently was Superintendent of Construction and Maintenance on the C.P.R. from Swift Current to Laggan. In 1901 he was appointed Assistant Chief Engineer for the old Northwest Territorial Government, subsequently succeeding to the office of Deputy Minister of Public Works, which he held until the formation of the province of Alberta, in 1905, when he was appointed Deputy Minister of Public Works for that province, a position he has now resigned to take up his new duties.

A. A. Carpenter, the legal member of the commission, was born at Hamilton, Ont., Sept. 3, 1873, and was educated at Hamilton Collegiate Institute and Toronto University. He practised law in Hamilton from 1897 until his removal to Alberta in 1903. He was appointed judge of the district court at MacLeod in 1907, and was subsequently moved to Calgary, where he still resides.

Detroit River Tunnel Construction Suit.

D. C. McBean, civil engineer, New York, is suing the Detroit River Tunnel Co. (Michigan Central Rd.), for \$2,000,000 royalties for alleged infringement of patents utilized in the construction of the Detroit River tunnel. His claim states that he attempted to build a tunnel under the Detroit River in 1872, but owing to changing currents and chemical gases the project was abandoned, and asserts that his experience and investigation at that time made the present construction possible, and that the company had profited by his patents.

Canadian Northern Ry. Bridges.—In the illustrated article on the C.N.R. bridges over the Carp, Mississippi and Ottawa Rivers and Stoney Creek, on pages 453 and 454 of this issue, it should have been stated that Canadian Railway and Marine World is indebted for the photographs from which the four illustrations were made to W. P. Chapman, M. Can. Soc. C.E., Engineer of Bridges, Mackenzie, Mann & Co., Ltd., under whose direction the bridges were designed and their erection inspected.

Eastern Rates Case.—An Ottawa press despatch says that a decision on the railway companies application to advance freight rates will be given by the Board of Railway Commissioners in the near future

Transportation Appointments Throughout Canada.

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

Canadian Government Railways.—W. P. HINTON, Traffic Manager, Grand Trunk Pacific Ry., has also been appointed Western Traffic Manager, Canadian Government Railways. Office, Winnipeg.

Capt. C. T. KNOWLTON has been appointed Superintendent of Ferries, in charge of floating equipment. Employees on all floating equipment report to, and receive instructions from him, and he reports to the General Superintendent, Intercolonial Ry. Office, Moncton, N.B.

A. R. MACGOWAN, Division Engineer, has had his jurisdiction changed to cover Districts 3 and 4, Intercolonial Ry., and the Prince Edward Island Ry. Office, Moncton, N.B.

H. T. RUHL, heretofore Resident Engineer, Intercolonial Ry., New Glasgow, N.S., has been appointed Division Engineer, Canadian Government Railways, with jurisdiction over Districts 1 and 2, I.R.C., and District 5, National Transcontinental Ry. Office, Moncton, N.B.

See also Intercolonial Ry. and National Transcontinental Ry.

Canadian Northern Ry.—A. ANGSTROM has been appointed Naval Architect. Office, Toronto.

W. H. GRANT, in addition to his duties as Manager of Construction, Mackenzie, Mann & Co., Ltd., has been appointed Tie and Timber Agent, Lines East of Port Arthur, Ont. Office, Toronto.

A. M. YUILL, heretofore Tie and Timber Agent, has been appointed General Tie and Timber Inspector, reporting to the Tie and Timber Agent, Eastern Lines. Office, Toronto.

J. H. McALPINE, heretofore District Master Mechanic, Parry Sound, Ont., has been appointed Master Mechanic, Ontario Division, and his former position has been abolished. Office, Toronto.

W. C. MOORE, heretofore District Master Mechanic, Trenton, Ont., has been appointed Assistant Master Mechanic, Ontario Division, and his former position has been abolished. Office, Toronto.

H. J. PAGE has been appointed Chief Special Agent, Lines East of Port Arthur, reporting to the General Manager, Eastern Lines. Office, Toronto.

G. H. HEDGE, heretofore Master Mechanic, Central Division, Winnipeg, has been appointed General Master Mechanic, Western Lines. Office, Winnipeg.

All communications are addressed to the office of the Superintendent of Rolling Stock, Winnipeg, as heretofore.

H. A. ENGLISH, heretofore Locomotive Inspector, Winnipeg, has been appointed Master Mechanic, Central Division, vice G. H. Hedge, promoted. Office, Winnipeg.

The position of Locomotive Inspector, heretofore occupied by him, has been abolished. All matters pertaining to the examination and engagement, or promotion of locomotive men and their general seniority rights, will be handled by the General Master Mechanic, Western Lines. All communications are addressed to the office of the Superintendent of Rolling Stock, Winnipeg.

H. L. VERCOE has been appointed Special Engineer, Lines West of Port Arthur, Ont. Office, Winnipeg.

W. T. MOODIE, heretofore Engineer Maintenance of Way, Winnipeg, has been appointed Division Engineer, Central Division. Office, Winnipeg.

T. LUCAS, heretofore Engineer of Maintenance of Way, west of Winnipeg, has been appointed Lease Engineer, Lines West of Port Arthur, Ont. Office, Winnipeg.

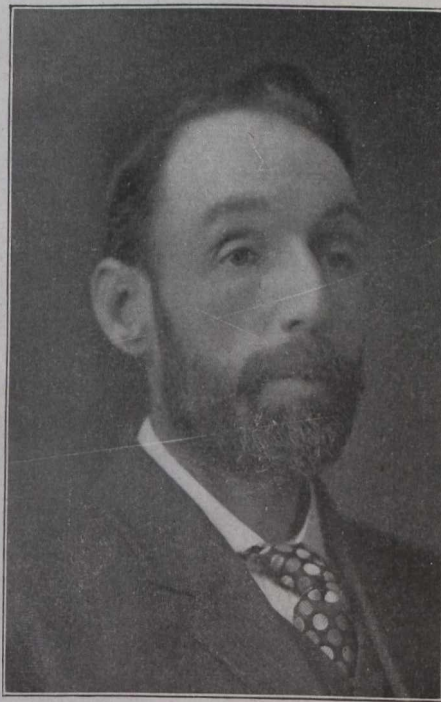
H. P. BLAKE, heretofore Superintendent of Water Supply and Heating, has had his title changed to Engineer Water Supply and Heating. Office, Winnipeg.

W. A. WHYTE, heretofore City Freight Agent, Calgary, Alta., has been appointed District Freight Agent, Regina, Sask., vice B. R. Marsales, transferred.

T. J. BROWN, heretofore Chief Dispatcher, District 1, Central Division, Port Arthur, Ont., has been appointed Superintendent, District 2, Western Division, vice B. T. Chappell, transferred. Office, Saskatoon, Sask.

A. MacRAE is reported to have been appointed Chief Dispatcher, District 2, Western Division, vice J. W. Crane, transferred. Office, Saskatoon, Sask.

A. CAMPBELL, heretofore in the General



G. H. Hedge,
General Master Mechanic, Western Lines
Canadian Northern Railway.

Freight Office, Winnipeg, has been appointed City Freight Agent, Saskatoon, Sask., vice H. S. Grainger, transferred.

B. R. MARSALES, heretofore District Freight Agent, Regina, Sask., has been appointed District Freight Agent, Calgary, Alta., vice A. Brostedt, transferred.

R. E. JOHNSTON, heretofore City Freight Agent, Edmonton, Alta., has been appointed City Freight Agent, Calgary, Alta., vice W. A. Whyte, transferred.

A. T. FRASER, heretofore District Engineer, Edmonton, Alta., has been appointed Division Engineer, Western Division. Office, Edmonton, Alta.

H. S. GRAINGER, heretofore City Freight Agent, Saskatoon, Sask., has been appointed City Freight Agent, Edmonton, Alta., vice R. E. Johnston, transferred.

D. R. CAMPBELL, heretofore Superintendent of Construction, Western Lines, has been appointed General Superintendent, Pacific Division. Office, Vancouver.

A. BROSTEDT, heretofore District Freight Agent, Calgary, Alta., has been appointed District Freight and Passenger Agent, Vancouver, B.C.

B. T. CHAPPELL, heretofore Superintendent, District 2, Saskatoon, Sask., has been appointed Superintendent, Pacific Division. Office, Kamloops Jct., B.C.

J. W. CRANE, heretofore Chief Dispatcher, District 2, Saskatoon, Sask., has been appointed Chief Dispatcher, Pacific Division. Office, Kamloops Jct., B.C.

C. H. QUANTIC, heretofore Master Mechanic and Trainmaster, Northern Construction Co. in British Columbia, has been appointed Master Mechanic, Pacific Division, C.N.R. Office, Port Mann, B.C.

Canadian Pacific Ry.—J. McNAUGHT, Solicitor, Montreal, has been granted extended leave of absence, and has gone to England, to enlist for active service.

GORDON ST. GEORGE SPOULE has been appointed Engineer of Tests, vice E. B. Tilt, resigned. Office, Montreal.

C. H. TOWLE has been appointed Assistant Superintendent, District 1, Atlantic Division, vice I. B. Merriman. Office, Brownville Jct., Me.

K. D. JOSEPH has been appointed Assistant Trainmaster, District 1, Atlantic Division, Brownville Jct., Me.

J. BOYD has been appointed Car Foreman, Trenton, Ont., vice W. Walsh, transferred.

W. WALSH, heretofore Car Foreman, Trenton, Ont., has been appointed Car Foreman, Union Station, Toronto, vice J. E. Hughes, transferred.

J. BANNON, heretofore Car Foreman, Lambton, Ont., has been appointed Car Foreman, West Toronto.

E. J. MURPHY, heretofore Assistant Locomotive Foreman, Lambton, Ont., has been appointed Locomotive Foreman there, vice F. Ronaldson, whose appointment as District Master Mechanic, Farnham, Que., was announced in our last issue.

J. TREGASKIS, heretofore fitter, has been appointed Assistant Locomotive Foreman, Lambton, Ont., vice E. J. Murphy, promoted.

J. JOLLY has been appointed Car Foreman, Lambton, Ont., vice J. Bannon, transferred.

The duties of the Resident Engineer at Sudbury, Ont., hitherto carried out by H. J. Black, whose appointment to other service was announced in our last issue, have been absorbed in those of H. R. MILES, Assistant Division Engineer, Lake Superior Division, North Bay, Ont.

J. E. HUGHES, heretofore Car Foreman, Union Station, Toronto, has been appointed Car Foreman in charge of general repairs, North Bay, Ont., vice J. Cowley, on extended leave of absence.

C. H. FOX, heretofore Assistant Division Engineer, Winnipeg, has been appointed Resident Engineer, District 2, Manitoba Division, vice E. L. Landorph, appointed Resident Engineer, District 1, Manitoba Division, Kenora, Ont., as announced in our last issue, and his former position has been abolished. Office, Winnipeg.

F. PATERSON, heretofore relieving station master, Winnipeg, has been appointed station master there.

W. B. RUFF, heretofore relieving station master, Winnipeg, has been appointed night station master there.

S. A. PIGGOTT, heretofore Foreman, Repair Yard, Winnipeg, has been appointed Car Foreman, Moose Jaw, Sask., vice R. Cooper, resigned.

J. H. BAKER, heretofore Roadmaster, Medicine Hat, Alta., has been appointed Roadmaster, Crowsnest Subdivision, vice J. Carlson. Headquarters, Lethbridge, Alta.

D. G. MacDONALD, heretofore Locomotive Foreman, Macleod, Alta., has been appoint-

ed Locomotive Foreman, Lethbridge, Alta., vice A. Hall, assigned to other duties.

S. FRASER, heretofore Locomotive and Car Foreman, Coronation, Alta., has been appointed Locomotive Foreman, Macleod, Alta., vice D. G. MacDonald, transferred.

P. S. BEATT, heretofore machinist, Ogden, Alta., has been appointed Locomotive and Car Foreman, Coronation, Alta., vice S. Fraser, transferred.

G. H. NOWELL, heretofore Erecting Shop Foreman, Ogden, Alta., has been appointed Locomotive Foreman, Cranbrook, B.C., vice J. M. Boyes, assigned to other duties.

The position of Storekeeper, British Columbia Lake and River Service, Nelson, B.C., heretofore held by G. W. COOPER, has been abolished and he has been assigned to other duties.

Canadian Pacific Ocean Services, Ltd.—Capt. J. V. FORSTER, R.N.R., heretofore Marine Superintendent, C.P.R. steamships, Liverpool, England, has been appointed General Superintendent, Canadian Pacific Ocean Services, Ltd., formed by the C.P.R. steamships and the Allan Line. Office, Liverpool, Eng.

Delaware and Hudson Co.—C. A. DOUGLASS has been appointed Manager, Hotel and Dining Service Department, vice A. Thieriot, deceased. Office, Albany, N.Y.

Grand Trunk Ry.—W. S. COOKSON, heretofore Assistant General Passenger Agent, has been appointed General Passenger Agent. Office, Montreal.

C. W. JOHNSTON, heretofore Assistant to Passenger Traffic Manager, has been appointed Assistant General Passenger Agent, vice W. S. Cookson, promoted, and his former position has been abolished. Office, Montreal.

J. H. GUESS, General Purchasing Agent, Montreal, having been granted leave of absence until the end of the year, the department is in charge of R. JOHNSON, Assistant General Purchasing Agent.

W. WALKER, heretofore Assistant Engineer, Ottawa Division, Ottawa, Ont., has been appointed Assistant Land Commissioner. Office, Montreal.

G. F. WOODSUM, heretofore Locomotive Foreman, Island Pond, Vt., has been appointed Assistant Shop Foreman, Portland, Me.

R. GARDINER, heretofore charge hand, Belleville, Ont., has been appointed Locomotive Foreman, Island Pond, Vt., vice G. F. Woodsum, transferred.

E. WALTON, heretofore clerk, has been appointed chief clerk to Superintendent of Transportation, Montreal, vice C. M. Walton, promoted.

C. M. WALTON, heretofore chief clerk to Superintendent of Transportation, Montreal, has been appointed Assistant Trainmaster, Districts 1 and 2, Montreal Division. Office, Island Pond, Vt.

H. MOWAT, heretofore instrument man, Belleville, Ont., has been appointed Assistant Engineer, Ottawa Division, vice W. Walker, promoted. Office, Ottawa, Ont.

G. A. STOKES, heretofore Division Agent, Ontario Lines, Toronto, has been appointed Superintendent of Sarnia Tunnel Terminals, vice F. J. McKee, promoted. Office, Port Huron, Mich.

F. J. MCKEE, heretofore Superintendent of Sarnia Tunnel Terminals, Port Huron, Mich., has been appointed Assistant Terminal Superintendent of Detroit Terminals. Office, Milwaukee Jct., Mich.

Grand Trunk Pacific Ry.—W. P. HINTON, heretofore Assistant Passenger Traffic Manager, G.T.R. and G.T.P.R., Montreal, has been appointed Traffic Manager, G.T.P.R. and Grand Trunk Pacific Coast Steamship Co., in charge of freight and passenger traffic, and the positions of Passenger Traffic Manager, heretofore held by G. T. Bell, Mont-

real, and Assistant Passenger Traffic Manager, heretofore held by W. P. Hinton, Montreal, have been abolished. Office, Winnipeg. G. T. Bell continues as Passenger Traffic Manager, G.T.R., Montreal.

G. A. McNICHOLL, heretofore Commis-



W. R. Devenish, A.M. Can. Soc. C.E., Superintendent, District 2, Intercolonial Railway.



C. W. Johnston, Assistant General Passenger Agent, Grand Trunk Railway.

sioner of Colonization and Industries, Prince Rupert, B.C., has been appointed Assistant General Freight and Passenger Agent, G.T.P.R. and Grand Trunk Pacific Coast Steamship Co., with jurisdiction west of Prince George, B.C., and Pacific coast points, Portland, Oregon, and north, including Alaska

and Yukon, and his previous position has been abolished. Office, Prince Rupert, B.C.

Great Northern Ry.—C. L. BANKSON has been appointed Assistant Purchasing Agent, vice A. Watson. Office, Seattle, Wash.

Intercolonial Ry.—W. R. DEVENISH, A.M. Can. Soc. C.E., heretofore Principal Assistant Engineer, Canadian Government Railways, Moncton, N.B., has been appointed Superintendent, District 2, vice Evan Price, deceased. Office, Campbellton, N.B.

W. R. FITZMAURICE, Assistant Superintendent, Moncton-St. Flavia District, Newcastle, N.B., who has been acting as Superintendent, District 2, Campbellton, N.B., since the death of Evan Price, has resumed his former position.

C. D. BOVARD, station agent, Moncton, N.B., who was appointed recently acting Assistant Superintendent, Moncton-St. Flavia District, Newcastle, N.B., during the absence of W. R. Fitzmaurice, has returned to Moncton, N.B.

P. CARLISLE has been appointed Roundhouse Foreman, Moncton, N.B., vice J. E. Stronach, now employed as locomotive driver.

F. CARROLL, heretofore charge hand, frog shop, has been appointed Foreman Blacksmith, Moncton, N.B., vice A. Stockall, retired on the Provident Fund.

S. B. WASS, A.M. Can. Soc. C.E., Assistant Superintendent, District 2, has had his jurisdiction extended to include the Fredericton and Loggieville Subdivisions. Office, Fredericton, N.B.

T. RYAN has been appointed Roundhouse Foreman, Riviere du Loup, Que., vice V. Saindon, assigned to other duties.

V. SAINDON, heretofore Roundhouse Foreman, Riviere du Loup, Que., has been appointed charge hand there.

See also Canadian Government Railways.

Kent Northern Ry.—T. O. MURRAY, heretofore Manager, Richibucto, N.B., has resigned.

National Transcontinental Ry.—The Grand Trunk Pacific Telegraph Co. has been appointed Supervisory Agent of Telegraphs between Moncton and Winnipeg, including the Lake Superior Branch to Fort William, with jurisdiction over all matters appertaining to the construction and maintenance of telegraph and telephone lines and the operation of railway and commercial telegraphs. Following are the G.T.P.T. Co.'s officers having jurisdiction,—H. HULATT, Manager of Telegraphs, and T. RODGER, Supervisor, Montreal; F. T. CALDWELL, Division Superintendent of Telegraphs, Winnipeg.

See also Canadian Government Railways.

Pere Marquette Rd.—A. C. RHODES has been appointed Auditor of Station and Miscellaneous Accounts, vice S. T. Billingsly, resigned. Office, Detroit, Mich.

Wabash Ry.—E. F. KEARNEY, heretofore one of the receivers, and President, of the Wabash Rd., has been elected President, Wabash Ry., the successor of the old company. Office, St. Louis, Mo.

W. S. PIERCE, heretofore Chairman of the Board, Wabash Rd., has been elected Chairman of the Board, Wabash Ry. Office, New York, N.Y.

J. E. TAUSSIG, heretofore General Superintendent, Texas and Pacific Ry., Dallas, Tex., has been appointed Assistant to the President, W. Ry. Office, St. Louis, Mo.

The following general officers, who held similar positions under the Wabash Rd. Co., have also been appointed,—J. L. MINNIS, General Solicitor; S. E. COTTER, General Manager; F. L. O'LEARY, Local Treasurer; T. J. TOBIN, Auditor; W. C. MAXWELL, General Traffic Manager; T. J. FRIER, Purchasing and Supply Agent; and Dr. M. P. PARRISH, Chief Surgeon, all with offices at St. Louis, Mo.

Freight and Passenger Traffic Notes.

All G.T.R. trains between Montreal and Ottawa now stop at St. Henri, Montreal.

Northern Pacific Ry. trains 19 and 20, between Winnipeg, Man., and St. Paul, Minn., were discontinued Oct. 24.

Canadian Pacific Ry. trains 61 and 62 between Winnipeg and Moose Jaw have been discontinued for the winter.

Canadian Pacific Ry. has withdrawn the Vancouver-Arrowhead and Penticton-Spences Bridge sleeping car service.

Canadian Pacific Ry. trains 63 and 64 between Calgary, Alta., and Spokane, Washington, have been discontinued for the winter.

The Canadian Northern ticket and freight office in Regina, Sask., has been moved from Scarth Ave. to the Western Trust Building, Eleventh Ave.

The Grand Trunk Pacific Ry., starting Nov. 24, added a tourist car to the equipment of its transcontinental trains running in and out of Prince Rupert, B.C.

The Board of Railway Commissioners has authorized a standard freight tariff of 3c. a mile on the Canadian Northern Ry. from Edmonton to Tollerton, Alta., and of 4c. a mile from Tollerton to Vancouver, B.C.

The Grand Trunk Pacific Ry. will until Dec. 31, issue from points on its lines, special round trip tickets to all Atlantic seaports in connection with all transatlantic steamship lines.

Canadian Pacific Ry. trains 1 and 2 now carry first-class and colonist cars through between Montreal and Vancouver, and also haul the St. Paul-Seattle standard and tourist sleeping cars west of Moose Jaw.

The Canadian Northern Ry. through passenger train service between Toronto and Winnipeg was put in operation Nov. 1. Trains left each point on Nov. 1, and arrived at their respective destinations on Nov. 3.

The Minneapolis, St. Paul & Sault Ste. Marie and Canadian Pacific trains 13 and 14, between St. Paul, Minneapolis and the Pacific coast have been discontinued for the winter. Trains 1 and 2 now make the St. Paul and Minneapolis connections at Moose Jaw, Sask.

Canadian Pacific Ry. trains 3 and 4 no longer carry through standard and tourist sleepers for Montreal, on account of the withdrawal of trains 5 and 6 east of Sudbury, but haul a Winnipeg-Fort William standard sleeping car in addition to their other equipment.

Starting Nov. 2, the Edmonton, Dunvegan and British Columbia Ry. changed the time of its bi-weekly service from Edmonton to Macleannan, Alberta, from 7.30 a.m. to 8 p.m., and added a sleeping car to its train equipment. The corresponding train from Macleannan leaves in the evening as heretofore, and also has a sleeping car attached.

The Pacific Great Eastern Ry. winter train service from North Vancouver, as announced Nov. 1, will give an approximately hourly service to Dundarave during the business hours morning and evening; two trains daily each way between North Vancouver and Whytecliffe, and three trains a day each way between North Vancouver and Caulfields.

Canadian Pacific Ry. passengers between Smiths Falls, Carleton Place, Ont., and points east thereof to Port Arthur, Ont., and points west thereof, may now travel either via main line through Renfrew and North Bay, or via Toronto and Sudbury, but must designate which route they desire at

time of purchase, and tickets must read accordingly.

Canadian Pacific Ry. trains 5 and 6, between Montreal and Sudbury, connecting at Sudbury with trains 3 and 4, have been withdrawn for the winter. Passengers between Montreal and Port Arthur or points beyond can leave Montreal in the morning by train 19 and connect at Toronto with train 3, but east bound train 4 does not make connection at Toronto with day train for Montreal and beyond.

The G.T.R. is enforcing an order under which passengers must show their tickets to the conductor or brakeman before entering the train on which they are to travel. In the larger stations the train staff occupy positions in front of the car steps to attend to this work, but on local trains, and between points, one or other will stand on the platform so as to command the entrance to two cars.

The Pere Marquette Rd. states in connection with the London & Port Stanley Ry. that in consequence of the line having been taken over by the City of London it entirely withdrew from its operation on July 1 and made an interchange arrangement for the L. & P.S.R. to handle its traffic for points between London and Port Stanley. The Pere Marquette trains enter the same station (Kains St.) at St. Thomas as is used by the L. & P.S.R.

The G.T.R. has cancelled the following trains:—Leaving Montreal for Vaudreuil 1.20 p.m. on Saturdays; leaving Montreal 1.30 daily except Saturday and Sunday for Pointe Claire; leaving Montreal 4.10 p.m. daily except Sunday for Pointe Claire; with the corresponding trains on the same days into Montreal; leaving Montreal daily except Sunday for Rouse's Point and Plattsburg via Dolson Jct., and Delaware and Hudson Rd., with the corresponding train from Plattsburg arriving in Montreal 9.35 a.m.

The Board of Railway Commissioners has approved a standard sleeping and parlor car tariff for the Edmonton, Dunvegan and British Columbia Ry. The rates for a lower berth are 8 mills a mile, with a minimum charge of \$1.50, while the charge for the upper berth is to be 80% of that for lower berths, with a minimum charge of \$1.25; the drawing room fare is 3½ times that for the lower berth, with a minimum charge of \$6; seats in parlor cars two-thirds of a cent a mile, with a minimum fare of 25c.

The Canadian Pacific Ry.'s trains 19 and 20, "The Canadian," between Montreal and Chicago, now carries Mount series compartment observation cars, instead of Glen series, between Toronto and Chicago only, instead of between Montreal and Chicago, and library observation parlor cars between Montreal and Toronto. Trains 21 and 22 carry Mount series compartment observation cars instead of Glen series between Montreal and Toronto. Mount cars each contain one drawing room and three compartments with no smoking room. Glen cars contain one drawing room, one compartment and a smoking room.

The Mayor and the President and Vice President of the Quebec Board of Trade of Quebec waited on the Dominion Government with a number of other business men, Nov. 2, to ask for lower freight rates on the National Transcontinental Ry. to Quebec as compared with Montreal, and for a passenger train service between Quebec and Cochrane. The deputation asked for a freight tariff between Quebec and Winnipeg and intermediate points based on mileage as compared with existing Montreal rates, and

a tri-weekly passenger train service between Quebec and Cochrane connecting with, and equal in speed and equipment to the service given between Cochrane and Winnipeg. These claims it was stated were endorsed by the Halifax and St. John Boards of Trade.

Railway Finance, Meetings, Etc.

Canadian Northern Ry.—The directors have announced that the earnings for the year ended June 30 were insufficient to enable payment to be made of the interest, which was due, Nov. 2, on the 5% income charge convertible debenture stock.

Canadian Pacific Ry.—There has been deposited with the Secretary of State at Ottawa copy of a lease by the Shuswap and Okanagan Ry. of its line to the C.P.R.

A duplicate copy of an indenture dated Sept. 22, made between Sir Charles Tupper, Sir Thomas Skinner and G. McL. Brown on the one part and the C.P.R. on the other has been filed with the Secretary of State at Ottawa. The deed releases and discharges a mortgage entered into July 25, 1885, between the C.P.R. and Baron Wolverton, Baron Revelstoke, and Sir Charles Tupper as trustees, for the purpose of securing C. P.R. first mortgage bonds for \$35,000,000, and reconveys to the company the railway and other property specifically mentioned as security.

Canadian Pacific Ry.—The directors on Nov. 8 declared a dividend of 2½% on the common stock for the quarter ended Sept. 30, being at the rate of 7% per annum from revenue and 3% per annum from special income account, payable Dec. 1, to shareholders of record on Nov. 30.

Grand Trunk Ry., Montreal press dispatch.—Blair & Co., of New York, have purchased from the G.T.R. and resold, \$4,000,000 two year 5% notes, dated Nov. 1, 1915. Principal and interest are payable in Montreal or New York, at the holders' option. The notes are a direct obligation of the G.T.R., and are specifically secured by pledge with the Bankers' Trust Co. trustee of \$5,254,632 in Grand Trunk Pacific Railway 4% sterling mortgage bonds due Jan. 1, 1962.

Temiscouata Ry.—Net earnings for August \$3,234 against \$3,667 for Aug. 1914. Aggregate net earnings for two months ended Aug. 31, \$7,035.

The Wabash Ry. Co. has been incorporated in the State of Indiana, with a capital of \$143,460,000, and the Equitable Trust Co. of New York has been ordered by the Federal District Court at St. Louis, Mo., to turn over the entire property purchased recently at the foreclosure sale for \$18,000,000, to the reorganization committee. The directors for the first year are,—S. Armstrong, H. B. Campbell, R. Goelet, L. Greer, E. F. Kearney, W. C. Maxwell, G. W. Murray, R. H. Neilson, J. C. Otteson, W. S. Pierce, L. Rhoades, A. E. Stuart, W. V. Stuart, J. E. Taussig and H. R. Winthrop. The new company has been refused permission to carry on its business in Missouri, as under a statute of 1913, it is provided that no company not registered under Missouri laws can be authorized to carry passengers or freight from one part of the state to another. A speedy settlement of the matter is anticipated, and in the meantime the company is operating under its constitutional rights.

The G.T.R. Barrie Division Railwaymen's Patriotic Association has voted \$600 to the Fields Comfort Commission, and \$200 to the British Red Cross Association. Two motor ambulances, valued at \$3,600, have already been given to the Canadian Red Cross Society.

Electric Railway Department

Rolling Stock for Three Rivers Traction Company.

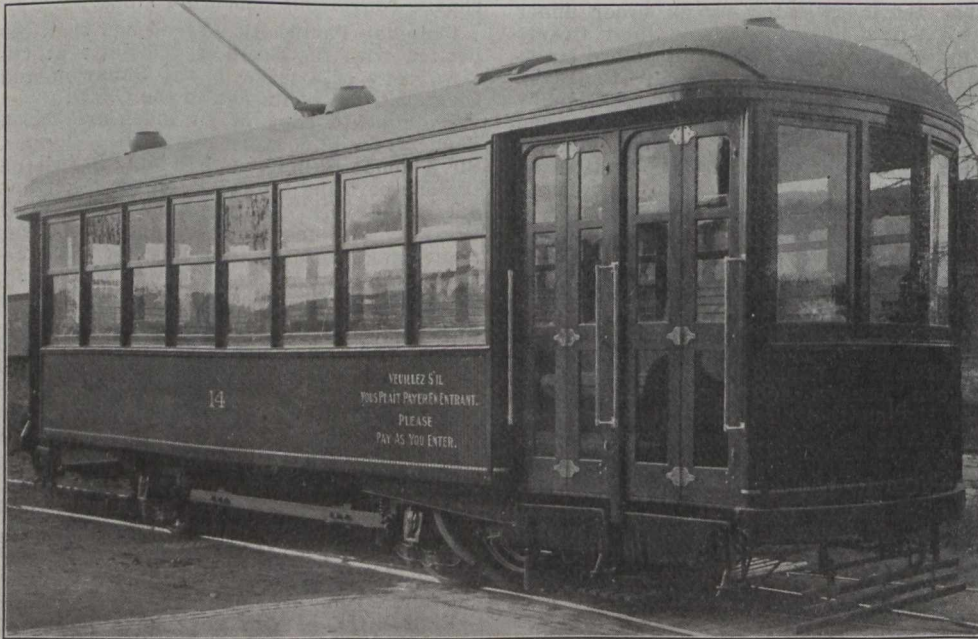
The Three Rivers Traction Co., which has built a circuit electric railway in Three Rivers, Que., and has a suburban line projected to Cap de la Madeleine, a total length of about seven miles, has received recently

ency exit door controlled by the motorman from his position in the front vestibule. There is a circular seat running around the rear vestibule which accommodates five passengers. The seats are the builder's

push buttons and buzzers, the current being procured from batteries.

The cars are heated with cross seat heaters with ten heaters per car. The cars are mounted on radiax trucks, 12 ft. wheel base, with 33 in. cast iron wheels and 4½ in. hot rolled axles. Each car is equipped with two Westinghouse 121-B-2 motors, with 1 K-10 controller, Westinghouse schedule S-M-1 straight air brake equipment. H-B life guards, and the Trolley Supply Co.'s Ideal trolley catcher. The bodies are painted olive green with gold lettering and striping.

The combination sweeper and tower car is the builder's standard single truck sweeper with a tower built on one end. The body or cab is of wood construction, built on a heavy wood underframe, which is reinforced with heavy steel plates. The roof is of the turtle back type, supported on steel carlines. The interior of the body is in ash, natural finish. The truck is the builder's standard design, which is extra heavy. The brooms and broom operating machinery are of the builder's standard construction. The brooms are mounted on a heavy shaft, which runs in bearings which slide up and down in heavy malleable iron guides. They are driven by a heavy chain and sprocket drive from a main driving shaft, which is directly connected to the motor by a gear and pinion drive, having the same gear ratio as the truck motors. Each set of brooms can be cut in or out by clutches on the main driving shaft. The brooms are raised and lowered by hand winches in the cab, a separate



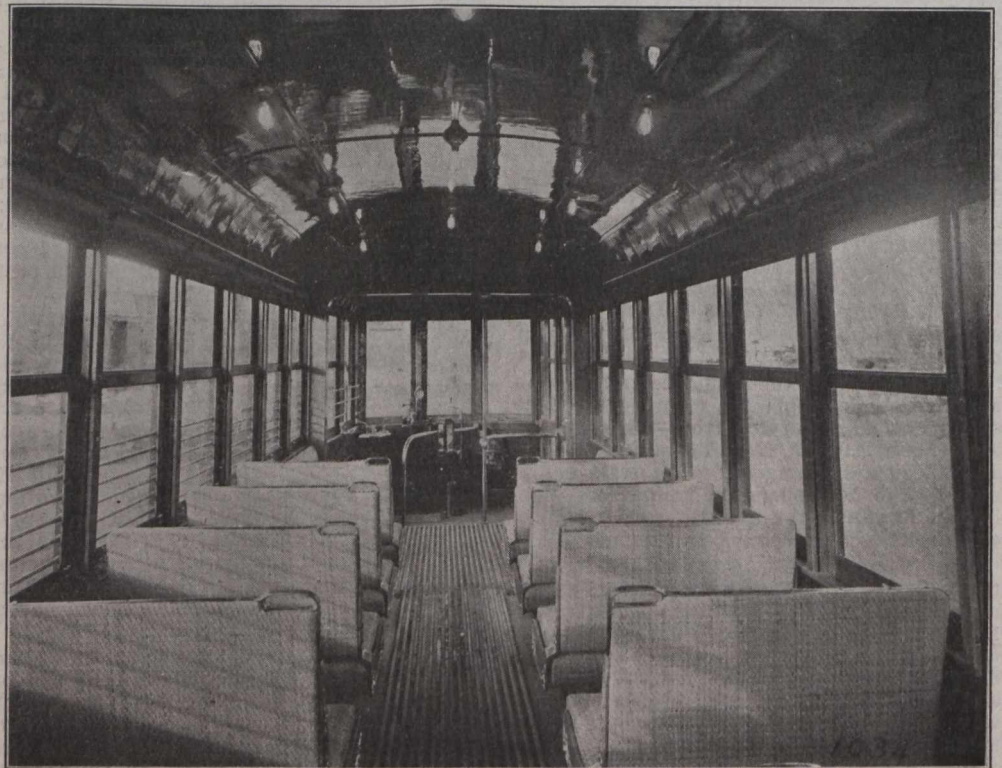
Three Rivers Traction Co.'s Passenger Car.

six single end, single truck, one man, near side cars, and a single truck combination sweeper and tower car, from the Ottawa Car Manufacturing Co. The general dimensions of the passenger cars are as follows:

Length of body	21 ft.
Length of front vestibule	6 ft. 2 ins.
Length of rear vestibule	4 ft.
Length over all	32 ft. 2 ins.
Width over all	8 ft. 6 ins.

The car bodies are of semi-convertible type, wood construction, built specially for one man, near side operation, and single end control. The sides are straight and sheeted vertically with narrow tongue and groove poplar sheeting. There are eight double sash windows on each side of the body. Top sash are made stationary and bottom sash made to raise to open. The roof is of arch type, with ventilators in each side, also one in front vestibule. The underframe is of composite construction, having wood sills reinforced with steel plates, which are rivetted together to form a complete steel frame. The flooring is ¾ in. thick tongue and groove, hard yellow pine covered, with hardwood floor matting laid lengthwise in the aisle. The interior trimming is red cherry. The front vestibule is made extra long and step opening extra wide, so that entrance and exit can be made by same. Each opening has an individual folding door and step of the builder's standard construction, so arranged that when the motorman opens the door, the step drops, and when he closes the door the step folds up. The doors are arranged so that the motorman can operate them singly or both together.

The front vestibule is equipped with brass p.a.y.e. rails, folding curtain behind motorman, and the Coleman Fare Box Co.'s no. 4 type of stationary fare box. The rear vestibule is circular in shape, with an emerg-



Three Rivers Traction Co.'s Passenger Car.

standard stationary type, covered with twill weave rattan and with brass grab handle on back. The curtains are pantasote mounted on metal rollers. The cars are also equipped with the builder's standard

winch being provided for each set of brooms. The tower has a working platform about 6 ft. by 5 ft. wide, with a folding fence all around it. The tower is raised and lowered by a heavy winch inside the

cab. The brooms are driven by one Westinghouse 101-B-2 motors. The truck is equipped with a Westinghouse 101-B-2 motors. The truck is equipped with a Westinghouse 101-B-2 two motor double end equipment, with K-11 controllers on the truck motor circuit and a R-28 controller on the broom motor circuit. The body is painted olive green with gold numbers, the tower is finished naturally, and the truck is painted black.

A Public Utilities Commissioner on Thoughtless Complaints.

In the Manitoba Public Utilities Commission's report for the year ended Mar. 30, 1914, only issued recently, the sole Commissioner, H. A. Robson, who has now resigned to re-enter the practice of law, as General Counsel for the Union Bank of Canada, says:—

"There have been many applications to this Commission by way of complaints against street railway transportation systems. Some of these applications have been lodged by the municipal authorities as representing the public. The companies involved are the prominent street railway utility, the Winnipeg Electric Ry. Co., and its associated companies, the Winnipeg, Selkirk and Lake Winnipeg Ry. Co. and Suburban Rapid Transit Co. These complaints fall under two heads. One class embraces troubles due to the act or neglect of individual employees. The companies are responsible for the conduct of their servants. Street railway operation requires a great number of men. The public are too apt to judge a whole system by isolated acts of the small percentage of men under standard, who, even with great care in selection, will always be found where a large number are employed. Complaints of this nature are dealt with as they arise. The companies deal with them promptly and insist upon proper discharge of duty by employees. Any one who would judge fairly of the operations of any public utility, and more especially street railway and telephone systems, must remember this human element. Taking our electric railway and telephone systems as a whole, any weaknesses of this nature are no more than exist in other systems, or in other labor employing undertakings, and are probably considerably less.

"The other class of applications affecting electric railways are those regarding improvements in the way of new lines, or equipment, or increased service. These demands are often made thoughtlessly. Improvements involving substantial capital expenditures are demanded without regard to financial possibilities or the likelihood of operating loss. The experience has been in municipalities outside of Winnipeg, first a demand for lower fares, regardless of rates defined in contracts, and then demands for construction of new lines or rebuilding existing ones or improving service. These rate reductions have been substantial, and have been granted by the companies after some pressure, but not altogether by compulsion. There is a want of appreciation of the fact that in sparse communities reduction of rates retards new construction and service improvement. It takes away the financial basis for a commission's order for new construction or improved service. There is a further tendency to look at the rate of dividend paid by the electric railway companies and draw conclusions superficially. To regulate a utility company so severely as to restrict its productiveness to a current commercial rate of interest, is to stifle this necessary class of enterprise.

These various considerations are frequently forgotten or deliberately overlooked by persons, sometimes in fact by elected representatives, who unwarrantably create discontent against what, considering rates and street facilities, is reasonable public service. A commission is bound to meet and deal with all these matters with a due regard to public service, but at the same time to withstand attempts to oppress a public utility through the medium of the commission. Applications before this Commission since its institution, some of which are described in this report, have produced many occasions of difficulty, because of circumstances such as those above described."

The Outside Running Board on Toronto Railway Cars.

The Toronto Ry. applied to the Ontario Railway and Municipal Board, Nov. 1, for an order under sec. 107 of the Ontario Rail-

which the company operates its street cars."

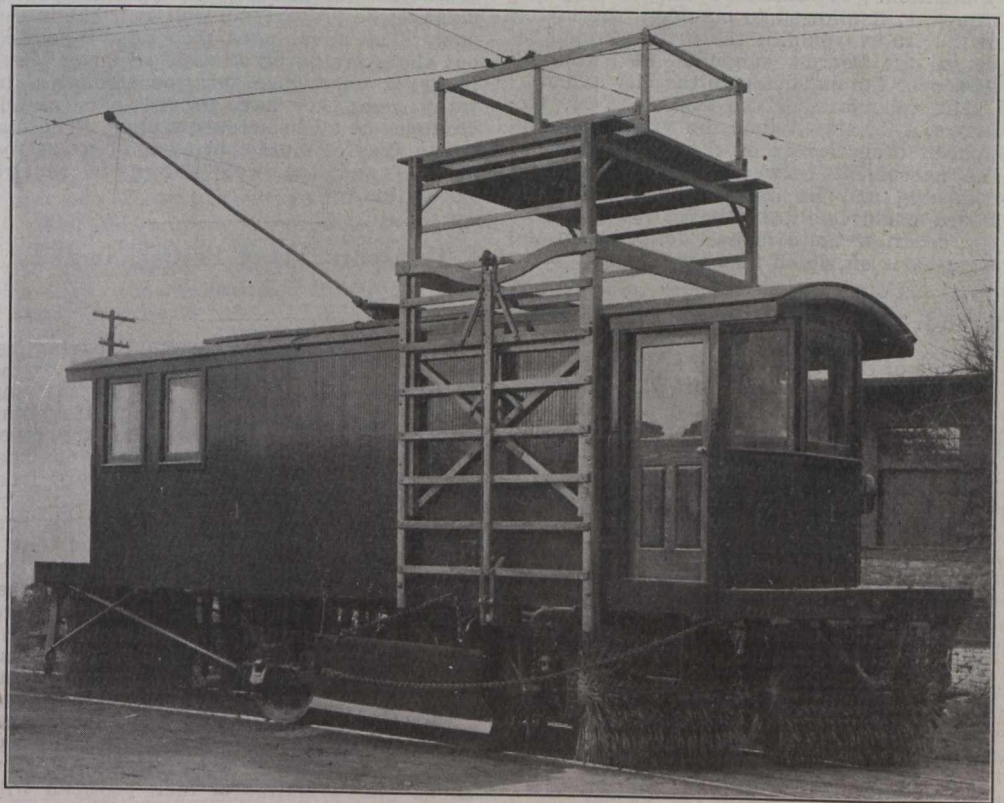
Sec. 107 of the Ontario Railway Act, referred to in the application, is as follows,—

1. Open or summer cars for use upon a railway operated by electricity, or upon a street railway, shall be so arranged or constructed that the seats for passengers will face the front of the car when in motion, and an aisle sufficiently wide to allow the passage of the conductor shall be provided in every such car, and no open or summer cars shall be used unless so arranged.

2. The side steps on such cars shall be so constructed, if in the opinion of the Board it is practicable, that passengers will be prevented from standing upon the same while the car is in motion.

3. The Board may relieve a company from the obligation imposed by subsec. 1 as to any route upon which the space between the tracks, commonly called the devil strip, is not sufficiently wide to permit cars so arranged or constructed to be used.

4. In all cases of dispute between a railway company and a municipal corporation



Three Rivers Traction Co.'s Combination Sweeper and Tower Car.

way Act, relieving it from the operation of cars with seats facing front and with an aisle through the centre sufficiently wide for the passage of the conductor, owing to the inability of the company to operate such cars on account of the narrow devil strip. The Board issued the following order, Nov. 2,—“Upon hearing counsel for the applicants and respondents and the Board having been investigating the question of the change of the type of summer cars in use on the applicant's railway, and having conducted experiments and inspected the tracks and devil strips of the said railway company's system, and the Board being of the opinion that the space between the tracks, commonly called the devil strip, is not sufficiently wide to permit cars with seats for passengers facing the front with an aisle sufficiently wide to allow the passage of the conductor, the Board orders that the applicants be hereby relieved until a final disposition of this application, from the obligation imposed by sub-sec. 1, of sec. 107, Ontario Railway Act, to all routes upon

or any person making complaint to the Board, as to the sufficiency of width, practicability of construction of cars, or as to any other matter or thing mentioned in this section, the order of the Board shall be final and shall not be subject to appeal, and any order made by the Board as to any such matter shall be carried out and fulfilled by the company, and the municipal corporation or either or both of them according to its terms.

The Mayor of Toronto, in one of his characteristic interviews, has declared that the city will appeal to the Legislature.

The Ontario Railway and Municipal Board, on Nov. 22, issued an interim order abolishing the outside running board and directing the City of Toronto and the company to confer, within 30 days, as to the best type of car to be substituted, and if they fail to agree, then the city will be given an additional 15 days to suggest an alternative type of car. It was announced that the city would refuse to confer with the company on the matter.

The Toronto Railway Extension on North Yonge Street.

In connection with the Ontario Railway and Municipal Board's order to the Toronto Ry. to extend its track from the end of its present track on Yonge St., Toronto, north-erly to Farnham Ave., the terminus of the Toronto and York Radial, the city, as has already been mentioned, has decided to appeal to the Imperial Privy Council against the Board's judgment, and has obtained legal sanction for its bond for \$2,000 to prosecute such appeal. The Toronto Ry., on Nov. 1, applied to the Ontario Railway and Municipal Board for a further order to enforce the original order, and to compel the city to carry on and complete the preliminary work necessary for the laying of the tracks. It was argued on behalf of the company that the city's appeal to the Privy Council did not involve a stay of proceedings, and that the city should be compelled to proceed with the construction of the foundation. It was also stated that the company, if allowed to complete the laying of the track, would, if the Privy Council reversed the Board's judgment, be willing to turn over the extension to the city at cost.

The Chairman of the Board, D. M. McIntyre, K.C., stated that the validity of the Board's order rested on the construction of the agreement between the city and the company, and he did not think that the Board could facilitate the carrying out of the order, if there is any doubt as to the legal basis on which that order rests.

Bion J. Arnold on Municipal Ownership.

Some of the reports of an address by Bion J. Arnold, of Chicago, before the American Electric Railway Association at San Francisco recently, made it appear that he favored the municipal ownership of electric railways, and believed such ownership inevitable. In a subsequent interview given to a Los Angeles paper, he stated that the reports which made him say that municipal ownership of utilities is inevitable are incorrect. He continued,—“What I did say was, Let us spend no more time worrying about whether immediate municipal ownership or ultimate municipal ownership is the thing the people want. Chicago once tried to get municipal ownership, but failed because the city could not raise the money, and a study of the indebtedness and bond limits of other cities present like conditions. Time will therefore settle whether the immediate municipal ownership or the ultimate municipal ownership plank, or neither, is to go into municipal platforms. The point I want to make is that we cease wasting our energies in opposing a public movement that will surely come, in spite of opposition, if it is economically sound, and direct our energies toward the terms of the purchase clause and the conditions of a resettlement franchise. It is time for us to prove to the courts and commissions that railway investment can be made practically as sound as what are termed savings bank investments. Several plans have been worked out, notably those which are included in my reports on Chicago, Kansas City and San Francisco. They differ somewhat in franchise conditions, but the central idea is to put tangible property behind intangible values, so that if ultimate municipal ownership should prove to be the policy of the country, it will come without destroying investment values, or curtailing service to the public during the time of its coming.

“The only advantage of municipal ownership and operation over private ownership, from a financial standpoint, is the ability of

a municipality, in most cases, to borrow money at a lower rate of interest than private corporations or individuals are willing to accept for their money when it is to be invested in public utilities. Therefore, if the municipality will operate an electric railway as efficiently and as economically as a private corporation, the municipally owned and operated railway will be the cheaper to the community. But the question is: Will the municipality so manage the property? Inasmuch as the margin is only the difference in the cost of money, it may easily be absorbed by inefficient management, through the loading of the municipally owned road with excessive operating expenses in the way of labor and other considerable items that may enter into the management. The San Francisco experiment is being watched closely and up to date it has been conducted and operated efficiently and honestly, although there has already been a tendency toward the construction of unprofitable extensions and toward a reduction of the fare. The question is whether the municipality will continue to manage the property as well as it has in the past. The advantages that I have pointed out above are purely theoretical advantages. I cannot emphasize this too strongly. In many cases they have proved to be no advantages at all in actual practice. The disadvantages of municipal ownership are too obvious and too well known to require reiteration.”

Transportation of Postmen in Sherbrooke.

The Post Office Department having refused to pay the compensation asked by the Sherbrooke Ry. & Power Co. for carrying postmen on its cars, they are now travelling on ordinary tickets the same as any other passengers. The company had a contract with the Department for four years from Sept. 1, 1911, to carry postmen at \$25 each per year. Prior to the expiry of this contract the Department was informed that a new one could not be entered into at less than \$35 per postman per year, and as that figure was not acceded to, the company refused to enter into a new contract.

The Department's contention that postmen should be carried at a less rate than any other passengers is an utterly indefensible one, as the Dominion Government has granted no aid whatever to electric railways and is not entitled to ask any favors from them. As a matter of fact, postmen with their mail bags, etc., generally take up more room than ordinary passengers, and they should certainly pay at least the same fare. There is no reason why Government employes should be carried at any less rate than the employes of any corporation or firm.

Traffic Commission Proposed for Toronto.—The Mayor of Toronto announced, Nov. 12, that the report of the engineers for a comprehensive street railway system which will provide for proper entrance for the radial lines, all to work in conjunction with the projected harbor improvements, was practically completed, and it was expected it would be submitted to the City Council about Dec. 1. He also stated that he would then advocate the appointment of a traffic commission to deal with the whole matter, and of this board, the engineers responsible for the report to be members. These are, F. A. Gaby, Hydro Electric Power Commission of Ontario; E. L. Cousins, Toronto Harbor Commission, and R. C. Harris, Commissioner of Works, City of Toronto.

City of Toronto Sues Toronto Railway Company.

Claiming \$95,859 as its percentage of the Toronto Ry. receipts for May last, the city has entered an action at Osgoode Hall to recover the amount. The action is the sequel to some little difference between the parties over payments for track repairs, etc. The company some time ago presented a bill to the city for \$74,000 for road work, but the Works Commissioner refused to pay the full amount, and the city sent a cheque for \$52,000 in payment. This cheque the company refused to accept, and declined to pay the percentage on the revenue for May until the city agreed to pay the full amount of the account rendered.

The city has also issued a writ against the company claiming \$14,000 for cleaning snow off the track allowance last winter.

The Jitney Situation in Canada.

The attention of the Montreal City Council has been called by Alderman Rubenstein to the franchise granted to the Canadian Autobus Co. At a recent meeting he asked if the council would call upon the company to fulfil the terms of the franchise, which was adopted in June, 1912. The litigation, initiated by a ratepayer, as to whether the council had the right to grant such a franchise, has been decided in the city's favor recently. The matter is still under the council's consideration. On Nov. 3, the Supreme Court of Canada granted leave to appeal against the decision referred to on condition that Robertson, the ratepayer taking the action, pay the costs incurred to date into court, within 10 days, and make his application to the Privy Council within 40 days thereafter.

The Toronto Police Commissioners have decided that after Jan. 1 every jitney must carry a plate, to be supplied by the commissioners, setting forth the fact that it is a “jitney,” and the number of passengers it is licensed to carry.

It was reported, Nov. 1, that there were 450 jitney licenses in existence in Vancouver, B.C., and that bonds had been put up by the owners in respect of 350 of them. Ten drivers have been prosecuted recently for running their cars without having deposited the bonds required by the regulations. The Vancouver Juvenile Protective Association has passed a resolution asking for a regulation preventing women and girls being taken as passengers in jitneys at night.

A jitney bylaw is still under discussion at New Westminster, B.C., one of the points of difference being as to the amount of the bond to be put up by the owners of the cars. The question is whether the amount of the bond is to be \$1,500 for each car, or \$1,500 for each passenger. In this connection it is to be noted that in Los Angeles, Calif., the bond is for \$5,000 a car.

A number of jitney drivers in Victoria, B.C., who were fined, Nov. 3, for breaches of the bylaw regarding the operation of these cars, stated that they could not pay the fines imposed, and elected to go to jail. One of the drivers gave as a reason for the excessive speed of his car that he had to make a living.

Toronto Eastern Ry.—There has been deposited with the Secretary of State at Ottawa copy of a trust deed made between the company and the Guardian Trust Co., securing an issue of 30 year 5% debenture stock or bonds on certain of the company's lines.

Hydro Electric Power Commission of Ontario's Radial Railway Projects.

Delegates representing a large number of the municipalities interested in the proposals made by the commission for building a number of radial electric railways in Ontario, met in Toronto, Oct. 27. The plans submitted covered a line from Toronto to Sarnia, via Port Credit, Milton, Guelph, Berlin, New Hamburg, Stratford, St. Marys, London, Strathroy, and Arcona. Sir Adam Beck, Chairman of the Commission, stated that the line was estimated to cost between \$10,000,000 and \$11,000,000, including the Dominion subsidy of \$6,400 a mile, which it was hoped would be voted. The Dominion Government was sympathetic, but the final decision rested with the Provincial Government. Once they were favorable the Dominion Government would do its duty. He urged that pressure be brought to bear upon the Government to the end that a declaration of policy might be obtained. Privately owned railways had been bonused, and the people's enterprises should be as generously treated. The actual cash would not be needed for two or three years, but it was necessary that the people know where the Government stands on this matter. The entrance into Toronto would be along the waterfront, and would carry passengers right to the market centre. The plan submitted was considered to be the most feasible one, but it might be changed to suit the circumstances, but it must be remembered that the line was projected, not for the benefit of any single municipality, but for the whole province. The acquirement of the Toronto Suburban Ry. from Toronto to Guelph had been suggested, but nothing had been done in regard to it. The delegates endorsed the proposal, and arranged that bylaws would be submitted at the coming municipal elections in the 15 municipalities interested between Toronto and Guelph.

Delegates from the municipalities through which the projected line will pass between Guelph and London, met at Guelph, Oct. 28, and those representing the municipalities between London and Sarnia, met at London, Nov. 2. They endorsed the general plans, and arranged for the submission of the bylaws necessary at the January election.

Chief Engineer Gaby laid the proposition before the City of Guelph, so far as it affects that city, Nov. 12, and before the city authorities of Berlin and surrounding municipalities, Nov. 13. It was stated that the City of Guelph would be asked to issue bonds for \$700,000; Guelph Township, \$325,000; City of Berlin, \$700,000; Town of Waterloo, \$125,000, and Waterloo Township, \$508,000.

At a meeting in Stratford, Nov. 11, a resolution approving of the plans suggested for that district was passed, and bylaws will be submitted at the January election. The City of London decided, Nov. 16, that its ratepayers should vote on a bylaw to raise \$1,000,000 for radial railway construction with the Toronto-Sarnia line. Meetings are being held in the other municipalities interested so that the ratepayers may have full information as to the proposition before the day of voting.

The routes selected by the H. E. P. Commission's engineers are as follows:

Humber River-Port Credit section.—From the west limits of the City of Toronto at the Humber River the line runs westerly parallel to and south of the G.T.R. main line. It crosses the Credit River about midway between the Lake Shore Road and the G.T.R.

Port Credit-Milton section.—Leaving Port Credit, the line crosses the G.T.R. about a

mile west. It then runs to 400 yds. north of Sheridan post office and thence direct to Milton.

Milton-Guelph section.—Crossing the C. P.R. west of that company's station at Milton the location runs to Lot 6, Con. 1, Esquesing Tsp., thence to Lot 7, Con. 5, Nassagaweya Tsp., thence to Lot 25, Con. 4, Nassagaweya Tsp., thence to Lot 30, Con. 1, Nassagaweya Tsp., thence to Lot 3, Con. 9, Puslinch Tsp., thence parallel to Toronto Suburban Ry. and Eramosa River to Guelph.

Guelph-Berlin section.—From Guelph it is proposed to run north westerly through Bloomingdale and New Germany to Berlin.

Berlin-Stratford section.—From Berlin the line runs westerly to Baden and thence parallel to the G.T.R. through Baden and New Hamburg to Stratford.

Stratford-St. Mary's section.—In Stratford the line runs westerly over private property and over the city streets to the western limits of the city. Thence it runs parallel to the G.T.R. to St. Mary's, through Downie and Blanchard Townships. It then runs southerly and westerly through the town over private property and streets, crossing the C.P.R. at grade and thence over the Thames River out of the town.

St. Mary's-London section.—From the western limits of the Town of St. Mary's the line runs in a south westerly direction through Blanchard and Biddulph Townships parallel to the G.T.R. to Granton. From Granton it runs through Biddulph Tsp. southerly to the northern boundary of London Tsp. From thence it runs south easterly adjacent to road between Lots 8 and 9 from Concessions 16 to 10 inclusive, London Tsp. From this point the line runs southerly through Concessions 9 to 4 inclusive, from lots 9 to 16 inclusive of London Tsp. From this point it follows (back a short distance) from the Thames River through Concessions 3 to 1 inclusive of London Tsp. to a point between the Sarnia Road and the Thames River, a short distance west of the Wharnclyffe Road just outside the north westerly boundary line of the City of London. From this point the line runs south easterly over private property and city streets and over the Thames River in the City of London to Bathurst St., some 260 ft. west of Ridout St., thence easterly along Bathurst St. to the London and Port Stanley Ry., which at present terminates on Bathurst St. just east of Richmond St.

The municipalities which will vote on the projects are the townships of London, Trafalgar, Waterloo, Blanchard, Wilmot, Downie, South Easthope, Toronto, Nassagaweya, Guelph, Etobicoke, North Easthope, Biddulph, Esquesing, Puslinch, Eramosa, Nelson, Ellice, East Zorra, and West Nissouri, the cities of London, Berlin, Guelph, Stratford, the towns of Waterloo, St. Marys, New Hamburg and Milton, and the villages of Mimico, New Toronto and Port Credit.

The estimated cost of the various projected lines is \$11,000,000.

Toronto and York Radial Ry.—The Ontario Railway and Municipal Board, on Nov. 1, ordered the Toronto and York Radial, on the application of the Toronto-Hamilton Highway Commission, to move its tracks from the centre to the south side of the road, where they pass from the side to the centre, for 1,100 ft., through the village. A further distance of 1,600 ft. is to be dealt with later. (July, pg. 277.)

Cost of Toronto Civic Car Line Construction.

In answer to an alderman's enquiry, the Toronto Commissioner of Works stated recently that the city had spent \$1,450,883 in the construction of civic car lines, which includes material purchased for the new Lansdowne Ave. line, not yet constructed. This includes an actual expenditure of \$1,350,149, while there are still liabilities outstanding of \$100,734.

Single track line has cost \$60,000 a mile, and double track line \$128,000, for paved construction, including devil strip in the latter case, with 15 ins. of concrete under rail and 18 ins. at intersections, together with overhead structure. The cost per mile of ballasted single track is estimated at \$30,744, and ballasted double track \$54,339, including overhead in each case.

Electric Railway Finance, Meetings, Etc.

British Columbia Electric Ry., and allied companies:

	Sept. 1915	Sept. 1914	July 1 to Sept. 30, 1915	July 1 to Sept. 30, 1914
Gross earnings	\$517,022	\$650,516	\$1,534,871	\$2,015,351
Expenses	477,026	509,626	1,448,479	1,548,304
Net Earnings	39,816	140,890	86,392	466,547

The percentage due to the City of Vancouver for October was \$3,292.85, against \$6,710.98 for Oct., 1914. The number of passengers carried in the periods named were 2,250,450 and 2,856,725 respectively.

Brantford Municipal Ry.—A press dispatch says that the Paris-Brantford section had net earnings of \$1,654 for the first six months of the fiscal year and that the Paris-Galt section had a deficit of \$2,674 for the same period.

Cape Breton Electric Co.—

	Sept. 1915	Sept. 1914	July 1 to Sept. 30, 1915	July 1 to Sept. 30, 1914
Gross earnings	\$33,639.17	\$27,773.00	\$98,184.68	\$91,981.66
Expenses	18,183.93	17,816.77	54,009.61	54,967.03
Net earnings	15,455.24	9,956.23	44,175.07	37,014.63

Detroit United Ry.—The ratepayers of Detroit, Mich., on Nov. 2, by a vote of 38,585 to 32,628, decided not to approve of the proposed purchase of the city lines. The plan was formulated by the city's Street Railway Commission, and had been under consideration for over a year. Municipal ownership of public utilities has been urged in Detroit for about 20 years, and has been endorsed by the ratepayers, in connection with the street railway. The recent vote was taken on a specific proposition for acquiring the company's lines in the city, by assuming the entire bonded debt, about \$24,000,000.

Hamilton St. Ry.—Earnings for three months ended Sept. 30, \$147,799.91, against \$151,476.35 for the same period 1914. The percentage paid to the city was \$11,824 and \$12,118.11 for the same two periods respectively.

London St. Ry.

	Oct. 1915	Oct. 1914	Jan. 1 to Oct. 31, 1915	Jan. 1 to Oct. 31, 1914
Gross earnings	\$34,234.74	\$30,722.19	\$330,355.46	\$313,507.56
Expenses	23,262.19	22,718.63	228,670.37	222,326.56
Net earnings	10,972.55	8,003.56	101,685.09	91,180.87

Montreal Tramways Co.—The Montreal Board of Control, on Nov. 5, decided to notify the company that legal proceedings will be taken if it does not comply with the provisions of the franchise bylaw to report receipts for the financial year ended Sept. 1, upon which the city's percentage is based. These returns were not made for 1913-14 until Jan., 1915, and the company still retains \$95,000 of the amount then due. The city could not recover interest on overdue amounts, and claims that it was compelled to borrow money to meet current charges because of the failure of the company to pay up.

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

	Sept. 1915	Sept. 1914	Jan. 1 to Sept. 30, 1915	Jan. 1 to Sept. 30, 1914
Gross earnings	\$804,902	\$879,321	\$7,150,605	\$7,022,107
Expenses	354,995	430,095	3,635,042	3,907,454
Net earnings	449,907	449,226	3,515,563	3,714,653

Toronto Ry.—The receipts from Jan. 1, and the percentages paid to the city, for 1915, compared with those for 1914, are as follows:

	1915		1914	
	Receipts	City percentage	Receipts	City percentage
January.....	\$471,226	70.486	\$501,844	75.277
February.....	440,324	67.047	461,274	72.060
March.....	488,463	94.141	530,751	102.159
April.....	467,702	95.540	501,435	100.287
May.....	468,953	95.790	534,465	106.893
June.....	450,582	90.116	525,033	105.106
July.....	449,086	88.821	495,882	103.772
August.....	447,968	89.953	507,912	101.582
September.....	489,573	39.166	525,255	42.021
October.....	461,683	36.934	487,689	39.274
	\$4,635,555	\$762,634	\$5,071,540	\$848.2

Winnipeg Electric Ry.:—

	Sept. 1915	Sept. 1914	Jan. 1 to Sept. 30, 1915	Jan. 1 to Sept. 30, 1914
Gross earnings	\$261,982	\$310,996	\$2,513,449	\$3,071.94
Expenses	185,256	185,977	1,666,849	1,781.63
Net earnings	76,726	125,019	846,600	1,290.31

Winnipeg, Selkirk and Lake Winnipeg Electric Ry.—Ten year general mortgage and gold refunding bonds to the extent of \$1,000,000 with interest at 5% are being offered by the Dominion Securities Corporation. They are due on July 1, 1925, but are liable to call in whole or in part at 103 with interest. These form a part of a closed mortgage issue of \$1,400,000, of which \$400,000 is reserved to retire an underlying 5% issue due in 1933, which are being exchanged. The Winnipeg Electric Ry. Co. guarantees principal and interest of the issue.

Charges Against Montreal Controllers re Electric Railway Matters.

N. Hebert resigned his position on the Board of Control for Montreal, Nov. 12. The municipal elections come in April, but the city council has the right to fill the position until that date. The ex-controller is involved in considerable litigation arising out of a meeting of the Board of Control held on June 20, when proposals made by him for a new franchise for the Montreal Tramways Co. were approved. An injunction was obtained to prevent the Board acting on the matter, one of the statements made in connection being that Hebert had asked for \$100,000 from certain interests as the price of his support. There are explanations given of Hebert's letters, and allegations and counter allegations are made, which form the basis of several actions. Justice Lafontaine, on Nov. 13, refused to grant any further extension of time in the case of St. Martin and Langlois, two ratepayers, against Hebert, which were set down for hearing Nov. 15. At the opening of the hearing on the latter date the ex-controller "confessed judgment," and Judge Greenshields entered the decision in the petitions of R. Langlois, to the effect "that the defendant is ousted and excluded" from the office of commissioner, while in the petition A. St. Martin, he is declared to have "usurped, occupied and exercised illegally the functions of commissioner." A penalty of \$400 was imposed and the ex-controller was directed to pay the costs.

A new quo warranto action was instituted against Controller McDonald, Nov. 4, in which it was alleged "that further, the respondent himself and by his agent, Renaud, on or about June 18, attempted to extort from the Montreal Tramways Co. a considerable sum of money on his promise to cease his systematic opposition to the adoption of any report on the subject of extending the franchise in favor of the company.

In the action against the Mayor for contempt by taking no notice of the mandamus of June 20, the case was argued in the Court of Appeals, Nov. 15, and judgment reserved.

Electric Railway Projects, Construction, Betterments, Etc.

British Columbia Electric Ry.—The Board of Railway Commissioners has authorized the B.C.E.R. to carry its lines across the Great Northern Ry.'s proposed industrial tracks on Front St., to connect with that line on Front St.; to remove crossover between the G.N.R. and the Canadian Pacific Ry. on Front St.; to rebuild same 125 ft. easterly; and to cross the C.P.R. tracks, all in New Westminster, B.C. (Nov., pg. 441.)

We are officially advised that the company is doing two or three small jobs of laying permanent track in New Westminster.

The company's engineers reported to the Vancouver city council, Nov 9, that the temporarily repaired Connaught Bridge is not sufficient to carry the electric railway traffic for any great length of time. The City Engineer contends that the bridge is sufficiently strong for all purposes. The City Engineer and the company's engineer were asked to go over the bridge together to check each other's work, and arrive at a decision as to its strength and capacity. (Nov., pg. 441.)

Lacombe & Blindman Valley Electric Ry.—The President, J. C. Gibson, Toronto, states that grading has been completed between Lacombe and Rimby, about 39 miles, "in other words, the entire length of the line except for some slight finishing work that will be necessary," and that practically all the materials required are on the ground except the steel rails, also that part of the rolling stock has been received. No work has been done since the autumn of 1914, when it was closed down on account of financial stringency. The Province of Alberta has guaranteed the company's 5% first mortgage bonds for \$7,000 a mile on 39.1 miles, a total of \$273,700, and a prospectus offering \$250,000 of them was issued by W. L. McKinnon & Co. in November, 1914, but we have no information as to what, if any, portion of this issue was sold. (Mar., pag. 108.)

Lake Erie and Northern Ry.—We are officially advised that the electrical equipment of this line has been considerably delayed, owing to the non delivery of the substation and car equipment by the manufacturer. A strong effort is being made to get the equipment installed so as to have the Galt-Brantford section in operation by Dec. 31. (Sept., pg. 356.)

London and Port Stanley Ry.—We are officially advised that the car barn under construction in London, Ont., is approximately 150 x 100 ft. It will have three tracks extending the whole length, and a 40 ft. space along one side, which will be used for repair shops and offices. The building will be of structural steel frame with brick and concrete walls, steel sash and concrete roof. The plans were prepared in the Hydro Electric Power Commission of Ontario's office under the direction of F. A. Gaby, Chief Engineer. (Nov., pg. 441.)

Moncton Tramways, Electricity and Gas Co.—A deputation from the Sunny Brae Town Council waited on E. B. Reeser, General Manager, at Moncton, N.B., recently asking for an extension of the company's lines via Church St., to the new town of Sunny Brae. Mr. Reeser expressed the company's desire to make the extension, and promised to take the matter up with the council in January. (Oct., pg. 404.)

The extension of the company's line from Longue Pointe to Pointe Aux Trembles was opened for traffic Nov. 15.

Montreal and Southern Counties Ry.—We are officially advised that the erection of the car barns at Granby, Que., on the ex-

tension from St. Cesaire, will be gone on with next spring. The sub power station on the extension has been completed. W. B. Powell, Montreal, is General Manager, and G. J. Meyer, St. Lambert, Que., is Electrical Engineer.

The Board of Railway Commissioners, in a recent judgment, finds that the bylaws and agreements with the municipality of St. Lambert cannot be read as obliging the company to construct permanent foundations for its tracks or to do more than complete its lines under the direction of the municipality, using T rails and laying them at the level of the existing roadbed, and laying gravel between the rails and for 2 ft. on either side. The public convenience and safety, however, demand that the highway and the railway levels be the same, and the Commissioners, under their general powers, direct that the railway tracks be made to conform to the new street level. In the contract, however, the cost is to be borne by the municipality. If the municipality desires the railway right of way and the highway to be of similar surface and foundation, it may do the work, the railway contributing such an amount as is represented by the cost of the foundation and surfacing authorized by the contract.

The Dominion Parliament is being asked to extend the time for the construction of the various lines authorized to be built. (Nov., pg. 441.)

Montreal Tramways Co.—The Board of Control has asked the company to establish the following new routes: A continuous circuit running from Villeray St. south on St. Denis St. and east on St. Catherine St., to Papineau St. or Delorimier Ave.; and to link Rosemount St. with Place d'Armes by a line on the small section of Frontenac St. now without car tracks. (Nov., pg. 441.)

Niagara River and Eastern Ry.—The Public Service Commission for the Second District of the State of New York has, according to a press report, under consideration an application by the N.R. and E. Ry. for permission to build and operate a double track line for passenger and freight service between Lockport and Niagara Falls. The N.R. and E. Ry. proposes to connect with the International Ry. and Buffalo, Lockport and Rochester Ry. at Lockport, and with trunk lines of steam railways in Canada by a new bridge across the river at Lewiston. It is also proposed to handle freight on the B., L. and R. Ry. and have connections with the Erie Rd. and Pennsylvania Rd. at Rochester. Charles Hickey, Lockport, is President.

Peterborough Radial Ry.—We are officially advised that the reconstruction and other work on the lines in Peterborough, Ont., comprise the laying of 2,000 ft. of new track on Charlotte St.; and the reconstruction of 1,400 ft. on Park St., and of 2,200 ft. on George St. W. G. Ferguson is Local Manager. (Nov., pg. 441.)

Pictou County Electric Co.—We are officially advised that the proposed extension to Parkdale, N.S., will not be gone on with until next spring. L. T. Flaherty, Stellarton, N.S., is Manager. (June, pg. 329.)

Quebec Ry., Light and Power Co.—H. G. Matthews, General Manager, is reported to have stated, Nov. 12, that the addition to the power house at Montmorency Falls is expected to be completed about Dec. 15. It will add 15,000 h.p. to the power at present at the company's disposal. (Oct., pg. 404.)

The Sudbury-Copper Cliff Suburban Electric Ry. is now operating an hourly service from just east of the C.P.R. crossing in Sudbury to Copper Cliff. As soon as the diamond crossing over the C.P.R. is put in,

which is expected to be early in December, a 15 minute service will be given on the whole length of the line both in Sudbury and out to Copper Cliff. A motor car, which has been borrowed from the Toronto & York Radial Ry., is being used at present, but two motor cars have been bought in New York.

Toronto, Barrie and Orillia Ry.—Application is being made to the Barrie, Ont., Town Council for an extension of a year for the laying within the town of the tracks authorized by the franchise. (May, pg. 190.)

Regina Municipal Railway Operations.

The following figures are for September, compared with those for Sept. 1914,—

	1915.	1914.
Revenue	\$13,545.63	\$15,420.43
Operating expenses	\$13,257.97	\$15,453.47
Operating surplus	\$287.66	.....
Operating deficit .....	.....	\$33.04
Capital charges	\$9,137.57	\$7,476.52
Total deficit	\$8,849.91	\$7,509.56
Passengers carried	282,408	318,238
Expenses per car mile without power	13.37c.	14.12c.
Expenses per car mile with power	17.64c.	18.59c.
Power per k.w.h.	2.07c.	2.00c.
Power per k.w.h. per car mile	4.26c.	4.46c.
Platform wages per car hour	74.43c.	79.79c.
Expenses percentage of earnings, without capital charges	97.91%	
Expenses percentage of earnings with capital charges	165.39%	

London and Port Stanley Railway's Traffic Interchange Arrangements.

We are officially advised that while there are some details in connection with tariffs and divisions with connecting lines not yet completed, working arrangements have been entered into as follows: At Port Stanley, car load freight is interchanged with the Bessemer & Marquette Dock & Navigation Co.'s ferry steamboat plying between Port Stanley and Conneaut, Ohio, in connection with the Bessemer & Lake Erie Ry. Passenger traffic is interchanged at Port Stanley with Cleveland & Buffalo Transit Co. There are arrangements for freight and passenger interchange at St. Thomas, Ont., with the Canadian Pacific, Grand Trunk, Pere Marquette and Wabash railways and with the Michigan Central Rd. on traffic ex Port Stanley. There are freight and passenger interchange arrangements at London with the Grand Trunk, also inter-switching arrangements with all steam railways there, enabling the L.&P.S.R. to accept or deliver freight at industries located on competing lines' tracks.

Provincial War Tax in Ottawa.—Judge McTavish gave judgment at Ottawa, Nov. 1, on an appeal by the Ottawa Electric Ry. against being assessed for the Provincial war tax, amounting to about \$800. The judge held that the agreement exempting the company from taxation referred only to such taxes as the municipal authorities control; the war tax is a provincial tax, and not a municipal one, and as such is not covered by the exemption in the agreement. The company did not object to pay the tax on its real property assessment, nor did it object to the amount of the assessment otherwise, but appealed simply on the point of law as to whether it was not exempt under the agreement.

Thirty Million Passengers were carried on ferry boats in San Francisco Bay without injury through accident during the year ending June 30, 1915. In the last 25 years, it is stated, only two deaths have resulted from ferry mishaps.

Mainly About Electric Railway People.

H. N. Kittson, one of the members of the Ontario Railway and Municipal Board, has been elected a Fellow of the Royal Colonial Institute.

F. Morton Morse, Secretary-Treasurer, Winnipeg Electric Ry., and Mrs. Morse, have gone to England to be near their three sons who are on active service.

Patrick Dubee, Secretary-Treasurer, Montreal Tramways Co., has been appointed a member of the American Electric Railway Association's taxation committee to represent Quebec Province.

W. G. Ross, formerly Managing Director, Montreal St. Ry., now Chairman, Montreal Harbor Commission, applied for \$50,000 of the Dominion Government war loan issued in November.

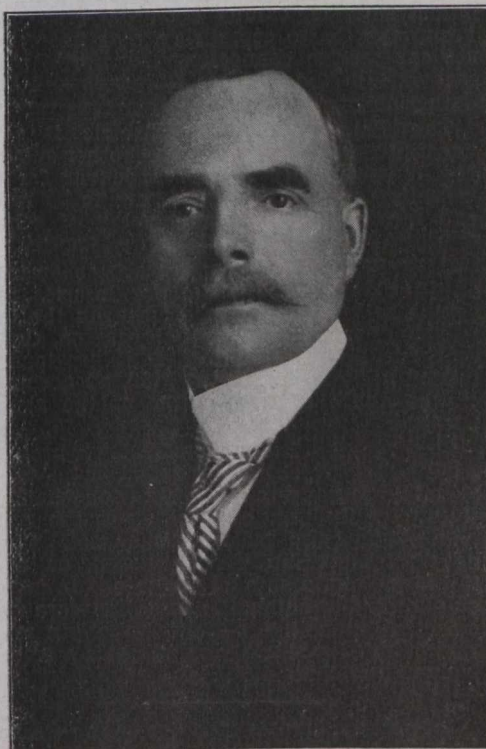
Lt.-Col. E. W. Rathbun, of Deseronto, Ont., President, Oshawa Ry., who is now on over-

will probably go to the front in the near future.

Capt. Guy Boyer, who has been appointed to the command of B Company, 22nd Battalion, Canadian Overseas Expeditionary Forces, vice Major A. V. Roy, killed in action, was at one time Superintendent of Construction, Montreal St. Ry., and on leaving that company's service went into business in Montreal as a general contractor.

S. Walter Mower, General Manager, Otsego and Herkimer Rd., Colliers Light, Heat & Power Co., and Hartwick Power Co., of Cooperstown, N.Y., has resigned due to change in ownership of the properties. Prior to his connection with the Otsego & Herkimer Ry. in October, 1912, he was General Manager of the London & Lake Erie Ry. & Transportation Co. at London, Ont. He was born at Grand Haven, Mich., Aug. 13, 1876. In 1890 he moved to Detroit, and in 1900 he became Assistant to General Manager, Detroit United Ry. In 1905 he became Assistant Superintendent, Port Huron Division, Michigan United Ry., and in June, 1906, he was appointed General Manager of the Southwestern Traction Company, which afterwards became the London & Lake Erie Ry. & Transportation Co. From 1903 to 1908 he was Secretary-Treasurer of the American Electric Railway Engineering Association.

George Lorne Guy, whose appointment as Engineer, Manitoba Public Utilities Commission, Winnipeg, was announced in our last issue, was born at Portage du Fort, Que., Apr. 14, 1883, and educated at Camden East, Newburgh, and Queen's University, Kingston, Ont. From 1899 to 1902 he was armature, transformer, meter and test operator, Canadian General Electric Co., Peterborough, Ont.; 1902 to 1907, chief electrician construction and operation, Graves, Bigwood and Co., at Byng Inlet, Ont., and during the winter months of these years was attending Queen's University. From 1907 to 1908 he was engaged in contract construction work at Camden East, Yarker and Newburgh, Ont.; 1908 to 1910, Engineer of Rolling Stock, Winnipeg Electric Ry., Winnipeg; 1910 to 1912, Engineer, Winnipeg City Electrical Department; 1912 to 1914, Sales Manager, Electrical Department, Canadian H. W. Johns-Manville Co., Winnipeg; and from Mar. 1, 1914 he has been in private practice as a consulting electrical engineer, which he will continue, in addition to his duties under the Manitoba Public Utilities Commission.



H. W. Cooper, Manager, Oshawa Railway and Thousand Islands Railway.

seas service, is in command of the 6th Reserve Brigade of Field Artillery, which forms the Canadian artillery depot of the training division of the new Canadian Army Corps.

Duncan McDonald, formerly General Manager, Montreal Tramways Co., will have to go up for re-election next spring if he wishes to continue as one of the Montreal city controllers. In a draw to decide which two of the controllers must retire from office, Controllers McDonald and Hebert lost.

Frank Harris, for the past four and a half years Publicity Agent, British Columbia Electric Ry. at Vancouver, has resigned. He went to Vancouver from New York in 1904, and served for several years on the Vancouver daily press before entering the B.C.E.R. Co.'s service. After having a rest he will again take up work.

Major C. W. W. McLean, who has been decorated with the Distinguished Service Order for skill in commanding his battery during a recent engagement, is son of Col. H. H. McLean, K.C., M.P., President, St. John Ry., who has been in command of the 7th Infantry Brigade at Valcartier, and who

Toronto Ry. and Overcrowding.—The appeal by the Toronto Ry. against a conviction for maintaining a public nuisance by overcrowding its cars, was dismissed by the First Division Court of the Appellate Division, at Toronto, Nov. 10, and the conviction confirmed. R. J. Fleming, General Manager, Toronto Ry., is reported to have stated that the conviction could have no real effect on the matter, as the question of the type of cars to be adopted was still before the Ontario Railway and Municipal Board, and until this had been decided, the company could do nothing to remedy overcrowding so far as it existed.

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

	Acres.
Calgary and Edmonton Ry.	1,606.00
Canadian Northern Ry.	487.79
Edmonton, Dunvegan and British Columbia Ry.	10.34
Grand Trunk Pacific Branch Lines Co.	11.26
Qu'Appelle, Long Lake and Saskatchewan Rd. and Steamboat Co.	2,398.00
Total	4,513.39

Edmonton Municipal Railway Results.

Engineering and Commerce Reports, the official organ of the Engineering and Commerce Efficiency Society of America, Inc., had in a recent issue an article, "Municipal System of Edmonton," by S. C. Reab, of Calgary, Alta., which deals with the street railway department as follows:—"On Nov. 8, 1908, Edmonton instituted the street railway trolley system, the largest venture in the municipal ownership programme, and at present the gravest problem. It seems impossible for this utility to be operated without incurring a big deficit each year. Edmonton has the difficulty to contend with of a large area and a relatively small population. The population is about 40,000, scattered over an area of some 27,000 acres. The establishment of a jitney service has affected somewhat the street railway earnings, but as this service was not established until the spring of 1915 its competition need not be taken into account in this review.

"The trackage of the Edmonton street railway system consists of 43 miles of double track (figured on a single-track basis) and 11 miles of single track. The utility had 258 employes and paid \$284,159 in salaries during 1914. Its debenture liability as of Dec. 31, 1914, was \$3,004,429. The cost of the system to that date totaled \$3,063,784, the buildings, track, and equipment having cost \$2,887,866, discount on debentures \$115,876, Strathcona franchise \$10,000, and land \$50,042. The sinking fund amounted to \$174,691. The year's expenditures were: Operating, \$535,430; maintenance, \$80,828; other, \$251,958; a total of \$867,670; against which were receipts aggregating \$642,109, leaving a deficit for the year of \$225,561.

"In 1914 the Edmonton street railway had one fatal accident and 10 suits for damages, all of which were successful, the department paying \$11,182 in damages."

London & Port Stanley Ry. Operating Results.—The London Railway Commission, which is operating the newly electrified line, claims that it is already a success. It is stated that the gross revenue for three months to Sept. 30 was \$71,000. At first several steam locomotives had to be hired for the freight traffic, and in August the operating expenses were about \$18,000, but in September, with complete electric operation, they were reduced to about \$10,000. The Commission has paid the city of London \$13,885.54 for the three months, which includes interest on the city's money used during that period, together with sinking fund and rental at the rate of \$20,000 a year. It is stated that these results were obtained in spite of the withdrawal of the Grand Trunk Ry.'s coal traffic, and without the Michigan Central trains which were formerly run over the line between St. Thomas and London.

A Motor-Bus Feeder Service for the municipal railway line of Portland, Ore., has been inaugurated. The city council has approved a contract for the operation of motor buses between 13th Ave. West and Nickerson St. and Ballard Ave. and Market St. The contractor receives 3c. for each adult carried and 1.5c. for each school pupil. The city will receive 2c. and 1c. respectively. The contractor is required to furnish an indemnity bond and has the right to extend his route to 20th Ave. and West 65th St.

The City of San Francisco has completely constructed 20 miles of electric railway. The city has acquired, constructed and equipped 43.6 miles of single track and has under consideration the immediate construction of an additional 5 miles.

Electric Railway Notes.

The Toronto Ry. gave \$1,000 to the Toronto Citizens Recruiting League on its tag day, Nov. 9.

The Calgary Municipal Railway is, according to a press report, starting to run one-man cars in the downtown section.

Arrangements are being made for the organization of a unit of the 6th Regiment in Vancouver, to be composed entirely of British Columbia Electric Ry. employes.

About 400 out of the nearly 7,000 members of the Street Railway Men's Union in Canada have enlisted for overseas military service. Their dues are being carried by the order during their period of service.

The Toronto Street Railway Men's Union had a membership of 2,000 when war started and 306 of its men have enlisted. All members who enlist are kept in good standing and the union looks after the wives and children.

The Montreal city council passed a resolution, Nov. 11, calling upon the Montreal Tramways Co. to establish a new five minute car service connecting the north and east ends of the city, via St. Denis and St. Catherine St. East.

The British Columbia Electric Ry. is negotiating with Point Grey and other suburban municipalities round Vancouver for a reduction of the number of cars to be run, and for a general rearrangement of schedules, in order to meet decreased traffic.

C. W. Keats, of Toronto, has been awarded \$3,800 as compensation for injuries received by his three year old son, in the International Ry. accident at Queenston, Ont., recently. The company had previously settled a claim, by paying \$750, on account of the death of a daughter of the same party.

The Toronto & York Radial Ry., through its Bulletin, which is distributed in its cars, asked its passengers recently to say whether they were in favor of smoking in the rear vestibules of the radial cars or not. Coupons were supplied for answering on and the result was a vote of two to one in favor of allowing smoking. It was therefore decided to continue to permit smoking in rear vestibules of cars not provided with a smoking compartment.

Saskatoon Parcels Delivery.—The Saskatoon, Sask., City Council is considering a proposal for a daily delivery of goods by street car between Saskatoon and Sutherland. It is proposed for a car to leave Saskatoon at 4 p.m.; parcels to be charged at from 5c. to 15c., according to weight; parcels to be delivered on to the car at Second Ave., Saskatoon, any time after 3 p.m., and to be called for at the Sutherland end. The maximum limit of weight to be 50 lbs., and the maximum size to be 3 x 2 x 2 ft., or 6 ft. long by 2 ft. wide. The person in charge of the delivery depot at Sutherland to be paid 30% of the total receipts. All parcels to be conveyed at sender's risk.

The Toronto Motor Bus Co. applied to the Toronto City Council, Nov. 1, for permission to operate a system of motor busses on 13 of the principal city streets, covering the greater portion of the city, for five years from Jan. 1, 1916. The vehicles the company proposed to use would be built with a centre aisle and have accommodation for 14 persons each. The company offered to commence business with 25 vehicles within 60 days, and pay \$5,000 a year for the privilege, and in addition 5% of the net earnings. Bain, Bicknell, Macdonell and Gordon, a local legal firm, represented the company.

Ontario Railway and Municipal Board's Jurisdiction Over Hamilton, Grimsby and Beamsville Electric Railway Confirmed.

The Ontario Railway and Municipal Board on May 10 ordered the Hamilton, Grimsby and Beamsville Electric Ry. to file within 30 days complete plans and specifications for sanitary conveniences on its passenger cars and in its passenger station at Grimsby. At the hearing the company contended that the Board had no jurisdiction over it, but that it was under Dominion jurisdiction. (See Canadian Railway and Marine World, June, pg. 226), and it appealed against the order.

On Nov. 9 the Appellate Division of the Ontario High Court of Judicature, gave a unanimous judgment dismissing the appeal with costs, so that the Board's order is confirmed.

Lack of Passenger Shelter at Sunnyside, Toronto.—In commenting on the lack of shelter for passengers while waiting for Toronto and York Radial Ry. cars at Sunnyside, Toronto, D. M. McIntyre, Chairman of the Ontario Railway and Municipal Board, is reported to have said recently: "We ordered a shelter to be built two years ago. The city has taken over the line, but is not operating it, and I understand has not even paid for it. We cannot order the railway company on an expiring title to build a station. Although the city has practically bought the line it will not assume the title. Last year the company offered voluntarily to place a lighted and heated car there for the convenience of the people. This winter there is nothing, and people wait as long as twenty minutes in the cold. It is a shame. I have endeavored to have the city provide a shelter, and have had the matter up over and over again. But the Board of Control refused recently to recommend the necessary expenditure."

Destruction of Suburban Shelters.—The British Columbia Electric Ry. has about 40 shelters and platforms on its line along the Fraser Valley to Chilliwack. It is reported that practically all of these are in a "deplorable state," owing to the breakage of windows, the smashing of doors, and the destruction of platforms. This is a condition of affairs that prevails on nearly every suburban line in Canada, and the companies are practically powerless to prevent it. These shelters are erected for the convenience and comfort of travellers, and ought to be protected by the public authorities from the ravages of hoodlums and others.

Vandalism in British Columbia.—Vancouver newspapers report that considerable damage has been done to Canadian Northern Pacific Ry. station and other buildings in the Fraser River Valley. Windows have been broken, floors torn up, electric light fixtures removed, and other damage done. The British Columbia Electric Ry. stations in the same district have also suffered similar damage.

New Siberian Railway.—Traffic on the Altai Railway, in Central Asia, says a Petrograd despatch to the London Times, has been opened, 14 months earlier than the date contemplated. The railway, a private line 500 miles long, will open up an immense and rich region of Siberia which has been without means of communication.

The 650 men recruited in Canada for railway construction work in Russia, 300 of whom were got together in Vancouver, B.C., are reported to have arrived in Archangel, after an uneventful voyage from New York.

Marine Department

Opening of Drydock and Ship Repairing Plant at Prince Rupert.

Announcement of the opening of the Grand Trunk Pacific Ry.'s drydock and ship repairing plant at Prince Rupert, B.C., was made in Canadian Railway and Marine World for November. The selection and survey of the site was made in 1910 and the actual work of construction was commenced early in 1912. A full description of the whole plant, with details and plans, was given in Canadian Railway and Marine World for Feb., 1912, but the following general particulars may be of interest now:—

The dock is in three units, with a total lifting capacity of 20,000 tons. All the units are interchangeable, and each is complete in itself, with pumps and air compressors. The two end sections are each of 5,000 tons capacity, and the middle section of 10,000

truss secured to the pile platform in such a way that it is free to rise and fall with the tide, and when being raised or lowered with the ship. The location of these attachments is such that when it is desired to use the dock in separate sections the bow section may be detached and moved around the pier work located along side the platform and secured in the same manner as provided in the original position. To make the other two sections available as separate docks it is only necessary to detach the middle section comprising six pontoons from the pier work and advance it the length of the detached section, when the sliding clamps upon the wings will coincide with those used for the previous section when the dock was operated as a whole. This will allow ample

The boiler and blacksmith shop is 76 x 150 ft., the central part being 33 ft. wide, provided with a 15-ton travelling crane. The machine shop is of similar design.

Canadian Northern Railway Car Ferry for British Columbia.

The Canadian Northern Pacific Ry. has given a contract to Geo. Davie & Sons, Levis, Que., to build a car ferry steamship to run between Steveston and Patricia Bay, B.C., about 40 miles. Steveston is at the mouth of the Fraser River, on the southwest corner of Lulu Island, due south of Vancouver, and at the terminus of the B.C. Electric Ry.'s Lulu Island line. It is about



Grand Trunk Pacific Railway's Drydock and Ship Repairing Plant at Prince Rupert.

tons capacity. When all three are joined together the dock will be capable of raising a vessel 600 ft. long of 20,000 tons. The dock has an overall length of 604 1-3 ft. on the keel blocks, a clear width of 100 ft. and a width overall of 130 ft. The lifting power is the aggregate of 12 pontoons of timber construction, each 130 ft. long, corresponding to the width of the dock, 44 ft. wide in a direction corresponding to the length of the dock and 15 ft. deep. These pontoons are united by steel side walls or wings 38 ft. high, 15 ft. wide at the bottom and 10 ft. wide at the top, the walls being divided so that the whole structure may be used under ordinary conditions as three separate docks, one of six pontoons with an overall length of 269 ft., and two or three pontoons each, with an overall length of 164 ft. each. The machinery for pumping the dock consists of centrifugal pumps, operated by electric motors, the capacity of the equipment being sufficient to pump the entire lifting power of the dock in two hours.

The structure as a whole is secured to the shore by clamps on the dock with a vertical

space between the centre and stern sections for the overhang without interference of vessels that may be docked in them.

The pumping machinery consists of twenty-four 12 in. centrifugal pumps, one in each end of each pontoon. They operate at approximately 275 r.p.m., being driven by a vertical shaft. All pumps on each side of each section are driven through gearing and horizontal shafting by an electric motor. Thus for the two smaller sections of three pontoons each there are four 100 h.p. motors, and for the larger section of six pontoons there are two 200 h.p. motors. These motors are alternating current, 3 phase, 25 cycle, 550 volt, with wound rotors and slip rings for variable speed control. The armature shaft is extended at both ends and operates the distribution shafts through reduction gearing at approximately 275 r.p.m.

The power house has all the boilers and power plant required for the supply of all the electric current for the drydock and shop equipment, all under one roof, covering an area of 15,392 sq. ft.

15 miles from New Westminster Bridge, from which point the C.N.R. is building a branch line to Steveston, which is about half finished. Patricia Bay is on the east coast of the Saanich Peninsula, of Vancouver Island, and another C.N.R. branch is under construction from there to Victoria, so that with the car ferry in operation the C.N.R. will have through service from Montreal to Victoria for both passenger and freight trains.

Plans for the car ferry have been prepared by A. Angstrom, who has been appointed Naval Architect for the C.N.R., and who will supervise the construction. While definite information is not yet available, it is said that the dimensions will be about as follows: length, 310 ft.; beam, 54 ft.; depth, 21 ft. The vessel will have three car tracks with a total capacity of 20 freight cars, and it is said that it will have double screws at each end and a speed of about 14 knots. It is expected to be ready for service next summer, and will be taken from Levis down the St. Lawrence River and through the Panama Canal.

The Stranding of the s.s. Lady of Gaspé.

An enquiry was held at Quebec, Oct. 20, by Capt. L. A. Demers, Dominion Wreck Commissioner, assisted by Capt. C. Koenig and L. R. Demers, as nautical assessors, into the causes of the stranding of the Gaspé Steamship Co.'s s.s. Lady of Gaspé near the Quebec Bridge site on Oct. 13.

The master, J. B. Deslauriers, stated that the Lady of Gaspé was an iron built, schooner rigged vessel owned by the Gaspé Steamship Co., with compound engines, capable of a speed of $9\frac{1}{2}$ miles an hour, drawing 13 ft. forward and $15\frac{1}{2}$ ft. aft, carrying a crew of 32, including one certificated officer beside himself. She was 1,189 tons gross and 705 tons net, official no. 78554. They left Montreal at 8 p.m. Oct. 12, and about 7.30 a.m. on the following day he saw the fog coming, and the engines were put standby. They were at this time off St. Bazil, and proceeded at half speed and slow, the tide then being flood, one hour from high water. When the north end of the Quebec Bridge was sighted about a point on the port quarter the engines were placed at half speed. Shortly after, upon land being perceived, the order of port was twice given, but the ship touched. The engines were stopped, but no attempt was made to go astern. As some time afterwards the engineer reported the ship was making water fast the boats were lowered in readiness for transferring the passengers, but they were not used as a tug was sent by the owners for that purpose. He further stated that the second officer acted as pilot and gave instructions with regard to the navigation of the ship from Montreal to Quebec at least.

The second officer, who holds no certificate, corroborated the master's evidence in so far as weather conditions were concerned, but added that he gave instructions with regard to steering and courses. He did not look at the compass, but steered by objects such as lights, etc. He did not know what error existed in the compass, and stated that the course he was steering when passing the bridge was E. by N. He did not know whether the captain had detailed a man on the lookout, nor whether there was one, but the fog signals were sounded. He averred that the ship lies as she grounded and he finds that she is now heading E N.E., but cannot account for this. He intended to anchor and steered in close in order to make the wharves.

The wheelsman said that he relieved the wheel some five or ten minutes prior to the grounding, finding it starboarded, and he received the order to port twice and the ship grounded. He did not know how she was heading at the time, but thinks she altered a point under the port helm.

The lookout man, who was 16 years of age, stated that he had been four months on the Lady of Gaspé, as sailor, wheelsman and lookout; that he was at the wheel from 6 o'clock until ordered to notify one man from the main deck to relieve him. Meantime the ship was being steered by the second mate. He then went on the lookout, but did not see any sight of land through the fog until after the grounding.

The engineer said that after standby was ordered some ten minutes he came on deck, but did not notice the weather conditions. Various orders were given and executed. At the time of the grounding the engines were going about half speed, which would be about seven knots.

The court's finding is as follows:—The evidence again brings to the court's attention the peculiarly unseamanlike navigation system which appears to prevail on certain

types of vessels. We notice that logs are kept, but very little importance seems to be attached to them, as there is not sufficient information contained in them to verify the statements made before the court. Any copy book at hand seems to have answered the purpose as a log book, and to satisfy the owners, who in this case, appear to look on such important documents with a marked degree of indifference. We cannot help expressing our astonishment at the fact that the master, through the system adopted on board this vessel, is subservient to the instructions and directions of a so called pilot,—second officer,—without even a cer-



Pier Derrick at Grand Trunk Pacific Railway's Ship Repairing Plant, Prince Rupert, B.C., Capacity, 50 Tons.

tificate of competency of any kind. The court heard the master say that he spoke to the pilot, or second mate, about anchoring before they reached the Quebec Bridge, but evidently the so called pilot deferred the anchoring to a later period with the result that he came to grief, although he, the pilot, stated that he sailed or steered a course to get near the wharves in order to anchor; but apparently only when he himself thought proper. The said pilot proved to be a man who was not even versed in the elementary navigation duties involved in handling a vessel, and showed lack of knowledge of distances, and in the opinion of this court was not a person to be entrusted with any duties respecting navigation. The master appeared to be an intelligent man, anxious to do well; but unfortunately influenced by the conditions indirectly imposed upon him by the management. Since he was satisfied to submit to a system which he must have known to be of

a pernicious nature, he must accept its responsibilities.

The ship having a number of passengers on board it was the duty of the captain to assert his authority, and order the anchoring of his vessel in the vicinity of St. Bazil, when he saw the dense fog approaching him. Having failed to do so, and being aware of the eddies forming around the piers of the Quebec Bridge, which had a tendency to cause bad steering, he should have taken a broader course passing more in the centre of the channel. It is shown that the vessel must have passed 150 ft. at the utmost from the north pier, whilst at that place there is a width of 1,800 ft. between the two piers. The court cannot come to any other conclusion than that the grounding of this vessel was due to lack of prudence and bad navigation on the part of the master, whom it holds solely to blame, and therefore suspends his master's certificate, 7253, for one year from Oct. 20; but recommends that a mate's certificate for passenger steamers and fore and aft rigged sailing vessels in the coasting trade be granted to him from Apr. 1, 1916, until expiration of his suspension. The court has dealt leniently with the master owing to the peculiar conditions existing on board his vessel regarding piloting of same. As the second mate had no certificate we cannot deal with him.

The court wishes to remark that in its point of view, the employment of an officer without a certificate, or even with one, with a verbal understanding that he is to act as pilot and advise the captain, deserves condemnation, as the influence of such arrangements is contrary to all common sense and is fraught with danger owing to its effect on the mind of the master, who, when he has secured an appointment must, even though conscious of the illogical system, submit to it in order to retain his position. We have every sympathy for a master who finds himself tied down to such conditions; but we, nevertheless, in accordance with our duties, hold him alone responsible for any mishaps. If a master takes command and is unacquainted with the river he should insist that a properly qualified pilot be engaged, irrespective of cost to the owners, and we are of opinion that the sooner the owners of small craft plying the river in charge of masters unfamiliar with the conditions, existing, are made to realize that the economy practiced in this manner is not conducive to any good, the better it will be for the reputation of our St. Lawrence route. The court is also of the opinion that whenever it has to deal with such a peculiar condition, that the owners should be called upon to defray the costs of investigation, as in this case the owners are indirectly responsible for this mishap.

Loss of the s.s. Donnacona.—Reports were received at the end of October that Canada Steamship Lines' s.s. Donnacona had foundered in mid-ocean, the crew having been saved. The Donnacona operated on the Great Lakes for several years and was one of the company's vessels which entered the Atlantic trade at the commencement of this year. She was built at Newcastle, Eng., in 1900 and was screw driven by triple expansion engines. Her dimensions were, length 245 ft., breadth 42 ft. 6 ins., depth 20 ft. 8 ins.; tonnage, 1,906 gross, 1,222 register. She was originally owned by R. O. & A. B. Mackay, Hamilton, Ont., and subsequently by Inland Lines, Ltd., Richelieu and Ontario Navigation Co., and Canada Steamship Lines, Ltd.

The Canadian Pacific Railway and the Allan Line.

In commenting on the separation of the C.P.R. steamships from the railway proper, and the absorption of the Allan Line, the Marine Engineer and Naval Architect says: "Under any circumstances other than those now prevailing, it would have been a matter of universal comment, even in the daily press, when the announcement was made that the Allan Line was to be, in fact, absorbed by its big ally, the Canadian Pacific Railway Co. As it is the news was published in a small paragraph, and there, as far as public interest goes, the matter seems to have ended. Of course, the eventual amalgamation of the two companies was long foreseen, and indeed, the arrangements between the two one time rivals had become so harmonious that what is now passing is largely a matter of form. It was probably fully intended, when the C.P.R. took measures to organize its steamship services in a separate organization. The advantages of that step were, of course, obvious as helping to smooth the financing of the working of its already great fleet. But the fact that the management had a purely shipping company under its control made things a great deal easier when a big fusion came to be undertaken. Competition was, of course, still keen when the Allan Line placed in its service the two fine and successful turbine liners, the Virginian and the Victorian, and thereby gave another proof of its adherence to the traditions set up by its founders, and adhered to throughout its long and successful career. For it was this company, if memory serves aright, which was the first—taught a lesson by the swamping and consequent foundering in the Bay of Biscay of the Australian passenger steamer London—to fit its liners with spar decks and to carry the tops of the engine room skylights to a higher plane. For many a year after that the Canadian steamships were notable for their clear flush decks, with an occasional deck house. Then came the era of steel, replacing the former iron fabrics, and though for Channel purposes and such like, small steamers had previously been constructed, the Allan Line put the first steel steamship on the Atlantic in its Buenos Ayrean, which preceded by some little time the famous Servia of the Cunard Co. Similarly the Virginian and her sister were the first two vessels fitted with turbine engines to be placed in the Atlantic trade, and it was their success which encouraged the Cunard Co. to build the Carmania, their experimental ship, which was soon followed by the Lusitania, most successful and most infa-

mously dealt with of all modern vessels, and the Mauretania. Then the whole passenger trade adopted the device whose value the Allan Line had proved. To these two sister ships the C.P.R.—still a keen rival—replied with the Empress of Britain and the Empress of Ireland. Much talk there was on both sides of further additions to the competition. Tenders for the construction of new vessels were even discussed, but nothing came of it and soon there was harmonious working, followed, it was said, by a certain community of financial interest, and now the C.P.R. has actually bought up the older company, though it does not yet appear that the name and entity of the famous line will be lost. . . . The gross tonnage of the Allan Line was about 155,000 tons—excluding the lost Hesperian—while that of the C.P.R. is about 239,000 tons, the united concerns thus controlling somewhere approaching 400,000 tons of first class steamships, many of which are modern passenger vessels."

Requisition of Vessel Tonnage for War Purposes.—An official statement was issued by the British Board of Trade, Nov. 2, denying the rumors that the Government contemplated requisitioning the entire British mercantile marine, but stating that it had been decided to take powers to deal, by requisitioning a sufficient number of vessels, with cases where an emergency of national importance exists at any time, in any particular market, owing to the absence of any tonnage, and further to regulate the employment of British shipping in the carriage of cargo between foreign ports by means of licenses.

Harbor Work at Port Nelson.—On the return of the s.s. Bellaventure from Hudson Bay, Nov. 2, it was reported that the construction of terminal facilities and other harbor work at Port Nelson was proceeding satisfactorily. Work was well under way with the building of the pier for loading grain, and three dredges were at work in the harbor. Two of these dredges were built on the spot, and the third, the Port Nelson, was built at Toronto, and was stated to be doing excellent work.

Canadian Vessel Sales During the War.—The Department of Trade and Commerce announces that the war has had a notable effect on the Canadian merchant marine in respect of the sale of vessels to other countries. Figures quoted show that vessels with a total tonnage of 17,044 and valued at \$1,150,950 have been sold, which is greater than the total for any other year. During the last completed fiscal year, Canadian tonnage increased by 45,721 tons.

New York State Barge Canal.

The work of constructing the barge canal connecting Lake Erie and New York, utilizing and improving the Erie, Champlain and Oswego Canals, is reported to be about 90% completed, and the Barge Canal Bulletin states that although it is so nearly finished, the uncompleted portions are so located that the usefulness of the enlarged waterway cannot be realized without their completion. On the stretch between the Hudson River and Lake Ontario one uncompleted contract forms the chief obstacle to the opening of navigation along the new route, and there is a similar obstacle on the Champlain Canal.

In 1903, \$101,000,000 was appropriated by New York State for the improvement of the Erie, Champlain and Oswego Canals, and during 1915, \$3,654,000 was appropriated for the completion of contracts let prior to Jan. 1, and for which no funds were available. The Legislature also passed an act submitting to the people for decision the question of issuing further bonds of \$27,000,000 for the completion of all work contemplated, and for the settlement of claims adjudged by the courts, and in the event of the further bonds being issued, the \$3,654,000 to be refunded to the State Treasury. Voting on the referendum took place at the state elections on Nov. 2, and while definite figures are not available at the time of writing (Nov. 17), we are officially advised that the proposal to issue \$27,000,000 of bonds was carried by approximately 45,000 majority.

The actual cost of construction has considerably exceeded the original estimates, which is partly explained by delays and contract cancellations due to court decisions and by expenditures for repairing breaks and maintaining navigation in the old canal. It is pointed out that in the original estimate the chief discrepancy was regarding the amount allowed for property damages, there being no precedent at that time to indicate that the courts would award such high land damages and power development claims as they have since done.

It is estimated that, if the work be taken in hand early in January, the Champlain Canal can be completed in a year, as can also the canal between Waterford and Oswego and the branch into Cayuga and Seneca Lakes. The balance of the canal through to Buffalo would require another year to finish. Some companies, it is announced, are already organized and prepared to put vessels into service on the canal, chiefly for local traffic, immediately it is completed.

List of Steam Vessels Registered in Canada During October, 1915.

No.	Name	Port of Registry	Where and When Built	Length	Breadth	Depth	Gross Tons	Reg. Tons	Engines, Etc.	Owner or Managing Owner	
133792	Brown Brothers	Port Stanley, Ont.	Port Stanley, Ont.	1915	75 2	16 5	7 7	64	44	18 sc.	A. C. Brown, St. Thomas, Ont.
138088	Leonard	Quebec, Que.	Birkenhead, Eng.	1914	313 0	65 1	20 9	3,365	1,401	318 sc.	Minister of Railways and Canals, Ottawa, Ont.
134524	Volunda II	Sydney, N.S.	Mira Gut, N.S.	1915	52 7	14 1	5 3		23	7 sc.	Joseph L. Phillips, Mira Gut, N.S.

List of Sailing Vessels and Barges Registered in Canada During October, 1915.

No.	Name	Port of Registry	Rig	Where and When Built	Length	Breadth	Depth	Reg. Tons	Owner or Managing Owner
134614	F. R. B. No. 1	Sault Ste. Marie, Ont.	Scow	Sault Ste. Marie, Ont. 1911	131 0	35 7	9 0	421	Algoma Dredging Co., Sault Ste. Marie, Ont.
134574	J. C. No. 5	New Westminster, B.C.	Barge	New Westminster. . . . 1910	59 0	23 0	5 4	63	J. Crane, New Westminster, B.C.
134575	J. C. VIII	"	"	" " " " " " " " " " " " 1911	64 0	24 0	6 2	81	" " " " " " " " " " " " " "
134576	J. C. No. 12	"	"	" " " " " " " " " " " " 1902	60 4	20 0	3 7	39	" " " " " " " " " " " " " "
90089	xKing Malcolm	Halifax, N.S.	"	Whiteinch, Scotland. 1885	228 0	36 5	21 0	1,304	C. G. Brister, Halifax, N.S.
138111	P. No. 2	New Westminster, B.C.	"	New Westminster. . . . 1911	90 0	30 0	7 0	166	Belyea & Co., New Westminster, B.C.
116559	Silver Queen	Maitland, N.S.	Schr.	Lower Selma, N.S. . . . 1915	92 0	27 1	8 0	134	A. M. Anthony, Lower Selma, N.S.
138092	Weld	Montreal	Barge	Montreal. 1915	132 2	31 5	8 8	291	T. Hall, Montreal

x A recovered wreck.

The Interstate Commerce Commission's Interference With Lake Traffic.

The Northwestern Miller, of Minneapolis, Minn., the leading milling publication in the United States, says in a recent issue:—

"The Lehigh Valley Rd. has petitioned the Interstate Commerce Commission for a rehearing on its application to be allowed to continue its lake service, which, in common with that of other railways operating lines on the lakes, was ordered stopped because the commission held that such service violated the terms of the Panama Canal Act. This act, commonly supposed to apply specifically to lines operating through the Panama Canal, was given general application by the simple inclusion of two words, 'and elsewhere,' thus bringing under its provisions the Great Lakes, according to the ruling of the Interstate Commerce Commission, a result no doubt never contemplated by the majority of those who voted for the measure in Congress, believing it to be intended only for regulating traffic through the canal.

"Taking advantage of this opportunity, the Interstate Commerce Commission promulgated a ruling which is one of the most preposterously destructive acts ever perpetrated by this body, totally disrupting, and destroying an established system of lake transportation, which has been of incalculable benefit to the western shipper and receiver, in the hope of encouraging an imaginary system of so-called 'independent' transportation, which, by a disjointed and disconnected service, is to accomplish what the commission considers 'competition,' but which actually would be a state of irresponsible chaos. Thereby it is the desire of the commission to turn backward the wheels of progress and revert to a system of transportation which was out of date a quarter of a century ago.

"In its interpretation of the meaning of the act, the commission is doubtless sincere, believing that in some mysterious way an independent system will come into being which shall give shippers the benefit of a competition which they do not at present have, and cannot under existing conditions obtain. The commission has been led into this belief by the persistent outcry of the paid agitators employed by certain associations and trade organizations. For some time actual shippers have been aware that, on the whole, the work of these agitators has been mischievous and even dangerous, but they are powerless to restrain them; the machinery for their employment having been put in operation, no way is provided either for detecting them wisely or suppressing them altogether. At first, no doubt, these hired 'experts' accomplished some good, and fully earned half their salaries. There were real grievances and discriminations, and these were rectified. But, by the same token, as each town had its own 'expert,' each plugging and pulling for his own community, their efforts practically offset each other; no city secured a permanent advantage in rates over the other, and the gain of one was nullified by the gain of the other.

"When all the obvious and real inequalities were settled, the 'expert' found himself in a perilous position. It was still incumbent upon him to 'make good' or lose his place. He then developed into the local oracle on freights, the man who had a grievance, the walking delegate who was the retained and paid foe of the carrier, the confirmed trouble breeder whose glib tongue was always heard telling about the iniquities of the existing transportation system; the advocate of the new, the untried, the irre-

sponsible and the theoretical; the first to appear before committees and commissions, urging the interests of those he represented, an agitator paid to be a thorn in the flesh, under the theory that nothing is gained except by constant complaint and eternal protest.

"The civic organizations that support and keep in motion these 'experts' rarely represent the real shippers either by their membership or their published sentiments. Mostly they are composed of real estate operators, local bankers, retailers, and a vast conglomeration of clerks, salesmen and subordinates, who like to imagine themselves representative citizens. Shippers who have a large and comprehensive view of traffic matters have long since withdrawn their support. They now wish they had never mistakenly set in motion the mischievous machinery they no longer control.

"Such influences as these, which really signify nothing but a distorted sense of local patriotism, are responsible for the hue and cry raised against the railway controlled lake lines which are now threatened with extinction. To these the Interstate Commerce Commission has evidently listened, not wisely but too well. If its ruling is not reversed, the western shipper and receiver, now so dependent upon lake transportation, will find themselves facing a situation nothing short of calamitous in the very near future. For this they may thank the walking delegates of their local trade unions, whether or not they themselves are members in good standing."

Alleged Shortage of Tonnage for Canadian Meat.—In response to questions in the British House of Commons, Nov. 11, regarding a statement that Canadian meats could not be shipped owing to a shortage of refrigerator vessels in the Canadian trade, the President of the Board of Trade stated that several cargoes of meat had been purchased in Canada, and he was in communication with the Government regarding further purchases, and that only insulated spaces on British vessels usually trading to Australia, New Zealand and the River Plate had been requisitioned.

The Loss of the s.s. Capilano.

Judgment in the enquiry into the causes of the foundering of the Union Steamship Co.'s s.s. Capilano off Texada Island, Oct. 1, was delivered at Victoria, B.C., Nov. 4, by Cap. J. D. Macpherson, acting Wreck Commissioner, as follows:—"The court, having carefully studied the evidence adduced, is unanimous in its decision that the loss by foundering of the s.s. Capilano in the early hours of Oct. 1, was directly due to her having struck some submerged obstruction about 9.25 on the night previous. The evidence, which, with a few exceptions, was singularly straightforward, clearly points to the fact that in striking the submerged obstruction she received serious but hidden damage, which, though unseen and undiscovered, was, nevertheless, strongly suspected by the master and most of the crew. The rather unusual examinations held and precautions taken after the impact, and continued throughout the night until almost the time the ship was abandoned, go to prove the last statement. The opinion of most of the witnesses examined was that the vessel had struck a submerged log or logs. Whatever she struck can never be proved, owing to the total loss of the ship in comparatively deep water and the impossibility of being able to examine the nature of the damage sustained. Taking into consideration, however, that the night was very dark and the atmosphere thick with smoke, and the probability that owing to these conditions the vessel, when rounding Scotch Fir Point, was farther off than was estimated, thus bringing her nearer to the Texada Island shore on her next course, and the very significant fact that the master, who had been lying down in his cabin since about 8 p.m., when awakened by the sound of the whistle being blown, went into the wheel house and immediately said, 'We are too close in. Haul her to the westward. Port,' and it was while executing this manoeuvre and under port helm that the vessel struck, the court is of the opinion that the Capilano was too close to the Texada Island shore, and that the submerged obstruction that she struck was not a log or logs, but a rock.

"Owing to there being an element of doubt, however slight, as to what the submerged obstruction was, the court is of the opinion that the master, Samuel Nelson, is entitled to the benefit of the doubt, and as he has hitherto held a blameless record and

Sault Ste. Marie Canals Traffic.

The following commerce passed through the Sault Ste. Marie Canals during October.

ARTICLES		CANADIAN CANAL	U. S. CANAL	TOTAL
Copper.....	Eastbound	Short tons 6,752	15,526	22,278
Grain.....	"	Bushels 3,848,973	5,841,877	9,690,850
Building stone.....	"	Short tons		
Flour.....	"	Barrels 688,630	934,330	1,572,960
Iron ore.....	"	Short tons 1,405,762	5,470,808	6,876,570
Pig iron.....	"	" 2,070	6,656	8,726
Lumber.....	"	" 4,716	58,568	63,284
Wheat.....	"	Bushels 17,603,834	47,783,522	65,387,356
General merchandise.....	"	Short tons 16,207	40,259	56,466
Passengers.....	"	Number 452	85	537
Coal, hard.....	Westbound	Short tons	260,188	260,188
Coal, soft.....	"	" 105,693	1,537,590	1,643,283
Flour.....	"	Barrels		
Grain.....	"	Bushels 373		373
Manufactured iron.....	"	Short tons 4,726	19,652	24,378
Iron ore.....	"	"	1,500	1,500
Salt.....	"	Barrels 8,540	113,876	122,416
General merchandise.....	"	Short tons 46,853	163,905	210,758
Passengers.....	"	Number 313	59	372
Summary.				
Vessel passages.....	Number	810	2,421	3,231
Registered tonnage.....	Net	1,977,901	7,305,350	9,283,250
Freight—Eastbound.....	Short tons	2,107,436	7,292,000	9,399,436
—Westbound.....	"	158,498	1,999,917	2,158,415
Total freight.....	"	2,265,934	9,291,917	11,557,851

has been highly spoken of by the Managing Director of the company to which the Capilano belonged, the court will not, in this instance, deal with his certificate, and returns same to him. It nevertheless severely censures him for retiring to his cabin under the conditions of weather then prevailing, and leaving an uncertified man, however experienced, in charge of the ship. This is not only a very reprehensible practice, but is distinctly contrary to the rules and regulations of the company to which the ship belonged. In the opinion of the court 8 p.m. is not a fit and proper time for a master of a steamer to retire when the weather is

thick and the next port of call is only 11 miles distant. The court, therefore, in severely censuring him also warns him as to his procedure in these waters in the future. The court blames Fletcher Hemmonds, second officer, for not calling the master under the existing circumstances, more especially as the vessel was then getting close to her next port of call, Van Anda. As he does not possess a certificate the court cannot deal with him in any other manner but to warn him that if ever he does possess one he will be held responsible, under like conditions, when he fails at once to advise the master when in any doubt."

Shipping Letters From the Head of the Great Lakes.

F. & W. Jones, Shipping Brokers, Fort William, Ont., have written as follows:—

Nov. 6.—Eight cargoes of coal were unloaded during the week, all bituminous. One boat is now under the rigs and 12 are en route. This line-up will keep the docks busy for the best part of the week. Dispatch in unloading is good, and boats are having no hold up and docks work nights when requested. Car shipments to the west are still very good and there is every prospect that they will keep normal for the balance of the season.

Grain shipments from the Canadian head of the Lakes during the first week in November show an increase of 1,000,000 bush. over the last week of October, total shipments being 12,952,550 bush. The number of cargoes this week was seventy, 31 going to Buffalo and Lake Erie side ports and 39 to Canadian ports. Receipts have dropped off slightly this week, being 15,627,922 bush. against 16,374,885 last week. Stocks have accumulated slightly and dispatch in loading is consequently better.

Conditions in the harvest fields are very favorable and threshing is well in hand. The car situation is somewhat relieved, although the effect has been felt rather severely during the past week, and a big increase in receipts from now on is looked for.

Nov. 13.—Coal arrivals fell off this week, five cargoes being unloaded. This was entirely owing to the severe weather that has prevailed on the lakes the last few days. Ten steamships are en route, five of which are over due. This will mean a slight congestion, but as five of the vessels are less than 3,000 tons it will not be serious. Half of the 100,000 tons mentioned in our letter of Oct. 30 may be reckoned to have come forward, but other docks are still looking for fairly big receipts so that at the moment the outlook is for receipts to continue at about the present rate until the close of navigation. Car shipments to the west are still about the same as at last writing, and cannot be considered as above normal.

Grain shipments during the week show an increase of approximately 500,000 bush. over last week, being 13,391,191 bush. of all kinds of grain. The number of cargoes was forty-nine, 30 being consigned to Buffalo and Lake Erie side ports and 19 to Canadian ports. Receipts from the west continue about the same, being 15,720,196 bush. of all grains. Stocks show an increase over last week, being 23,226,303 bush. of all grains. Dispatch in loading has been good, and in but few cases have vessels had to call at more than two elevators. It is expected that before the close of lake navigation the Canadian Government railways will announce an all rail grain rate from Fort William and Winnipeg to St. John, which will be such as to permit the export of many millions of bushels of the western crop during the winter. The Government will utilize the Na-

tional Transcontinental and Intercolonial Railways for the winter grain route, and there is no doubt that the C.P.R. and C.N.R. will meet the Government rate.

Grain continues to go down the lakes in record breaking quantities, and if the present European demand continues it is anticipated that about 110,000,000 bush. will have been shipped from Fort William and Port Arthur by the close of lake navigation. The estimated exportable surplus of the western crop is 250,000,000 bush., the storage capacity at the head of the lakes is about 45,000,000 bush., leaving for storage in interior elevators, or to be shipped out during the winter months, about 95,000,000 bush. The world's weekly requirements are about 9,000,000 bush., and from North America alone for the past five weeks about 11,000,000 bush. per week have been going to Europe. There must, therefore, be an accumulation of wheat stocks there, and this with the Argentine and Australian export period nearly at hand may in a considerable measure check the Canadian grain movement. Stocks in store at date, receipts and shipments during the week, are as follows:

	Stocks.	Receipts.	Shipments.
Wheat	18,231,048	12,367,940	11,007,654
Oats	4,013,561	2,947,807	2,117,064
Barley	531,577	290,071	132,458
Flax	450,117	114,384	134,007

Nov. 20.—Coal arrivals during the past week show an increase over last week, 12 cargoes having been unloaded, all bituminous. Three cargoes are reported en route. Dispatch in unloading has been good; during the first few days of the week there were vessels waiting turn at three of the docks. This was owing to vessels having been held below during the storm of the week previous, but the docks worked continuously on boats until they were unloaded, and no serious congestion resulted. Car shipments to the west remain about the same, being barely a normal movement.

Grain movement here continued fairly active during the past week, showing a slight increase in lake shipments over the previous week, the total loaded into vessels being 13,858,708 bush. This was carried in 56 vessels; 31 going to United States ports and 25 to Canadian. Receipts from the western provinces are good, but have not reached the amount received in last week's statement; this, consequently, together with improved shipments, makes a slight decrease in total stocks on hand, which now stands at 22,923,185 bush. of all grains, or approximately half of the elevator total capacity of the two ports. Dispatch in loading has been good, many cargoes being collected at only one elevator. At time of writing there are some 15 vessels overdue for grain cargoes, and were it not for the adverse weather on the lakes, no doubt a larger total shipment would have been made during the week. Threshing in the west has made good progress of late. It is estimated that Manitoba has finished, but two other

provinces still have a large amount to thresh. Farmers in those provinces have, in many cases, stacked their grain, thus enabling them to hold it safely indefinitely. It is estimated that there will be a continual movement of grain from the west to the head of the lakes well into next spring, partly on account of delayed threshing and partly on account of delay in railway transportation. The opening of navigation for 1916 should therefore find elevators at the head of the lakes well stocked, and the opening should bring active demand for lake space. It is computed that less than 40% of the estimated exportable surplus of all grains will have been moved east at the close of navigation. Stocks in store at date, receipts and shipments during the week:—

	Stocks.	Receipts.	Shipments.
Wheat	17,932,173	10,337,717	10,636,593
Oats	3,903,262	2,746,875	2,857,175
Barley	557,764	308,425	282,237
Flax	529,985	162,571	82,703

The Panama Canal Commission announces that due to continued earth movements, the condition of the channel at the bases of the east and west Culebra slides was essentially the same at Oct. 12, as it was a week previous, the material removed during that period being about equal to the movement into the prism. It is deemed inadvisable therefore at this time to predict any approximate date for the reopening of the canal, and shipping interests are being advised to use some other route until further notice, which will be given as soon as material is removed sufficiently to insure more stable conditions. For the seven days prior to Oct. 12, 208,732 cubic yards of soil was removed from the prism, the work being continued at high pressure.

Dominion Wreck Commissioner's Judgment Questioned.—A question was asked in the British House of Commons, Oct. 27, regarding the Dominion Wreck Commissioner's judgment on the Batiscan-Bengore Head collision, which suspended the certificate of the master of the s.s. Batiscan for two years and granted a chief mate's certificate for the latter 12 months of that period. In the question, stress was laid on the fact that there was no loss of life following the collision. The Secretary of the Board of Trade replied that the matter was receiving careful attention.

Toronto Harbor Improvement Works.—In an interview at Toronto, Nov. 3, the Minister of Public Works stated that he had had a conference with the Canadian Stewart Co., the general contractors for the works for the improvement of the Toronto harbor, and all the matters in dispute in connection with the quality of certain work carried out under subcontracts had been cleared up, and no further difficulty need be expected.

The Iperia Shipping Corporation Ltd. has been incorporated under the Dominion Companies Act, with \$1,000 capital and office at Montreal, to carry on a general steamship owning and managing business, and to engage in the carrying of passengers and cargo on the high seas and inland waters. The incorporators are: R. M. Page, New York; L. Macfarlane, W. B. Scott, A. Knatchbull-Hugesson and J. G. Cartwright, Montreal.

Prince Edward Island Car Ferry Operation.—The Charlottetown, P.E.I., Board of Trade has been advised by F. P. Gutelius, General Manager, Canadian Government Railways, that the car ferry steamship Prince Edward Island will be placed in service between the mainland and the Island during the winter. During the first part of the season it will operate between Pictou and Charlottetown, and later between Pictou and Georgetown.

Atlantic and Pacific Ocean Marine.

The navigation of the St. Lawrence River to Montreal, which usually closes about Nov. 20, is, it is stated, to be continued until ice renders conditions dangerous.

A press dispatch from London, England, states that the British Government has released three captured German sailing vessels, the *Terpsichore*, *Chili* and *Carl*, for carrying grain from Canada to Europe.

The Norwegian Government is reported to have ordered two bulk freight steamships to be built in Cleveland, Ohio, and it is stated that the number will probably be increased to six.

The British s.s. *Rio Lages*, which was reported to be on fire, about 280 miles from Halifax, N.S., early in November, when bound from New York to Queenstown, Ireland, with sugar, arrived at Halifax, Nov. 5.

The British s.s. *Oakfield* was reported via Cape Race by wireless, Nov. 22, to be disabled in mid-ocean, through the loss of her propeller blades during a heavy storm. The s.s. *San Giorgio*, of New York, was standing by.

The s.s. *Baerenfels*, which arrived at Montreal, Nov. 11, was formerly owned in Germany, and was captured by a British warship off Alexandria, Egypt, in Sept., 1914, and became British property by judgment of a prize court.

The Pacific Mail Steamship Co.'s s.s. *Persia*, formerly *Coptic*, is reported to have been sold to the *Toyo Kissen Kaisha*, of Japan, for \$450,000. She was built at Belfast, Ireland, in 1881, and is 4,356 gross tons and 2,744 register.

It is reported that six steamships have been dispatched from Nova Scotia, loaded with cars built for Russia, by the Eastern Car Co. They are on their way to Vladivostock, the vessels being divided between two routes, via Cape Horn and via the Suez Canal.

Two steamships, the *Hamborn* and *Hocking*, sailing under the United States flag, were seized and taken to Halifax, N.S., recently, and it is reported that they are to be dealt with in the prize court there. They were formerly under German ownership, and it is contended that the transfer is not legal.

Furness Withy and Co. have inaugurated an additional trans-Atlantic service between Philadelphia and Glasgow with the steamships *Lowther Range*, *Hambleton Range* and *Annapolis*. It is expected that an additional vessel will be employed and a fortnightly service maintained.

A press report states that Furness, Withy and Co. have purchased the steamships *Den of Crombie*, *Den of Glamis*, *Den of Kelly* and *Den of Ruthven*, from the *Barrie Shipping Co.*, Dundee, Scotland, and that they will be renamed and placed in service between England and American ports.

The C.P.R. has purchased the s.s. *Franktor* from the *Palace Shipping Co.*, Liverpool, England, and has changed its name to *Mattawa*. She is a sister vessel to the C.P.R. s.s. *Medora*, which was formerly the s.s. *Frankmount*, purchased from the *Palace Shipping Co.* earlier in the year.

The Cunard Co.'s s.s. *Ste. Cecilia*, which grounded in the St. Lawrence River at *Maisonneuve*, Nov. 13, was released, Nov. 15, and taken back to her dock, without damage. She was lightered of about 500 tons of cargo, which was afterwards restowed.

The *Osaka Shosen Kaisha* s.s. *Manila Maru* arrived at Victoria, B.C., Nov. 12, on her maiden voyage from Japan to British Columbia and Puget Sound ports. An average speed of nearly 14 knots an hour was

maintained, and the journey from Yokohama to Victoria occupied a little over 13 days.

The s.s. *Turret Chief*, formerly owned by the Canadian Lake and Ocean Navigation Co., and wrecked in the Great Lakes disaster of Nov. 1913, and which was eventually salvaged, repaired and sold to A. B. Mackay, Hamilton, Ont., is reported to have been sold to British interests. She has been utilized for some time in carrying war supplies to Europe.

The C.P.R. winter schedule of passenger steamship sailings comes into operation Dec. 3, with the sailing of the s.s. *Misanabie* from Liverpool and its arrival at St. John, N.B., Dec. 13. This vessel and the s.s. *Metagama* alternately, will make eight round trips, concluding Apr. 15, 1916, and neither of the vessels will call at Halifax, either eastbound or westbound.

The Norwegian owned s.s. *Wacousta*, under charter to the Nova Scotia Steel and Coal Co., and which was carrying a consignment of box cars built by the Eastern Car Co., from Pictou, N.S., to Vladivostock, Russia, was reported, Nov. 14, to have been sunk by an enemy submarine, off the west coast of Crete, in the Mediterranean Sea. The crew are reported to have been saved.

In addition to the s.s. *Empress of Japan*, the release of which was announced in our last issue, the British Admiralty has released the C.P.R. steamships *Empress of Asia* and *Empress of Russia*, all of which have been in use as auxiliary cruisers since the commencement of the war. They are being refitted at Hong Kong, and will be replaced in service between Vancouver and the Orient shortly.

The s.s. *Hendon Hall*, owned by Furness Withy and Co., which was wrecked at *Pointe des Montes* in the spring and abandoned to the underwriters, but which was eventually salvaged and taken to St. Joseph de Levis, where she has been repaired, at a reported cost of \$95,000, is stated to have been sold to the West Hartlepool Navigation Co., West Hartlepool, Eng.

The Pacific and Eastern Shipping Co. is reported to have been incorporated in New York State, with \$2,000,000 authorized capital, with the chief object of purchasing a contract executed in Peking, China, between the Chinese Government and F. Hartens and Sons, Cumberland, Md., and a citizen of Peking. It is stated that Chinese are the chief shareholders, among them being the Chinese Ambassador at Washington, D.C., who is about to retire.

The France and Canada Steamship Co., the incorporation of which has been previously mentioned, has inaugurated a steamship service between Canada and France, with the steamships *Carpathia* and *Ultonia*, formerly of the Cunard Line. It is stated that the chief feature of this service will be the transport of horses for war purposes, from a U.S. port after the St. Lawrence is closed for the winter, and that 10 vessels will be engaged.

It was reported in Sydney, N.S., Nov. 16, that the s.s. *Dunelm*, owned by Canada Steamship Lines, Ltd., and under charter to the Dominion Iron and Steel Co., had met with some disaster at sea. She sailed from Sydney on Oct. 16, with a full cargo of steel for Manchester, England, and up to the date mentioned had not been heard from. She carried a crew of 25. She was built at Sunderland, England, in 1907, of steel, equipped with triple expansion engines, 19½, 33 and 54 ins. by 36 ins. stroke, supplied with steam by two Scotch boilers 12½ by 11½ ft. with forced draught. Her dimensions are: length, 250 ft.; breadth, 43 ft.; depth, 26½ ft.; tonnage, 2,318 gross, 1,480

register. She was originally owned by R. O. and A. B. Mackay, Ltd., Hamilton, which was absorbed by Inland Lines, Ltd., and later by the Richelieu and Ontario Navigation Co., which was afterwards merged in Canada Steamship Lines, Ltd.

Maritime Provinces and Newfoundland.

The St. John, N.B., harbor revenue for October was \$4,519.22 against \$4,447.19 for Oct., 1914.

Rhodes, Curry and Co., Amherst, N.S., have received instructions to proceed with the construction of a new shed 80 by 350 ft. on No. 15 pier at St. John, N.B.

The Newfoundland sealing vessel *Iceland*, under construction at Greenock, Scotland, is reported to have been taken over by the British Government for naval purposes.

The Canadian Whaling Co.'s s.s. *Grib*, which ran ashore on Anticosti Island in October, and which was abandoned to the underwriters after several attempts to float her failed, was sold by tender, Nov. 10.

The Dominion Coal Co.'s shipments up the St. Lawrence this year are stated to be about 1,500,000 tons, 400,000 less than last year, which was a record. The company's output for November was 33 1-3% over Nov., 1914.

The Eastern Steamship Corporation's s.s. *Governor Cobb* sailed from St. John, N.B., Nov. 15, on her last trip to Boston, Mass., for the season. She will be overhauled at Boston, and be placed in service between Key West and Havana for the winter.

Mention was made in our last issue of certain whaling vessels owned in Newfoundland, which it was stated the Russian Government was considering purchasing for ice service in the White Sea. It is now stated in New York that the s.s. *Beothic* has been acquired, the price paid being given as \$290,000. The steamships *Adventure*, *Bellaventure* and *Bonaventure* were inspected and tested during November by Russian Government agents.

The steamships *Easington* and *Kron Prins Olav*, under charter to the Dominion Coal Co., are definitely considered to have been lost while en route with coal from North Sydney, N.S., to St. John and Montreal respectively. They sailed from North Sydney about Sept. 25, and ran into a storm. Nothing has been heard of them since. The *Easington* was built in 1907, and was 1,387 tons, insured for £20,000. The *Kron Prins Olav* was also built in 1907, was 3,923 tons and insured for £48,800.

Province of Quebec Marine.

J. A. Samson, Bienville, Que., has been appointed Inspector of boilers and machinery of steamboats, vice J. H. Fontaine, resigned.

The Marine Department has replaced the old wooden range lights, which have been in service for nearly 44 years, along the Richelieu River at *Lacolle*, by modern steel structures.

The Montreal Harbor Commissioners have added another steam tug to those already in service, making a total of 11. The latest was launched at Montreal, Nov. 11, and named *David Seath*.

The Marine Department gave notice, Nov. 11, that about Nov. 20 the lighthouse building on *Pointe Claire* pier, Lake St. Louis, in the River St. Lawrence, would be removed and replaced by a concrete block surmounted by a gas lantern elevated 10 ft. above the top of the pier.

The Montreal Drydock and Ship Repairing Co. has completed the renovating and en-

larging of the Tate drydock at the foot of Mill St., Montreal, abutting on the Lachine canal, and it is stated that the largest grain carriers can now be accommodated there. The dock is operated under lease from the Dominion Government.

Traffic returns for the navigation season for the Lachine Canal show that 35,685,288 bush. of grain passed through to the end of October, compared with 61,811,340 for the same period in 1914. In October 6,432,245 bush. were dealt with against 10,574,568 in Oct. 1914, rather more than half of the decrease being in wheat. The tonnage operated through the canal in October was 573,729 against 704,841 in Oct. 1914, the cargo tonnage being 487,905 and 602,964 for the same periods respectively. The number of vessel passages in October was 1,123, or 41 less than in Oct. 1914.

The Gaspé Steamship Co.'s s.s. *Lady of Gaspé*, which ran ashore near the Quebec Bridge site, while en route from Montreal to Quebec and Gaspé ports, Oct. 13, was floated by compressed air, Oct. 23, and taken to Pointe a Carcy wharf, Quebec, where she sank on the following day, owing to the failure of one of her pumps. She has since been abandoned, and J. Bouchard, Manager of the company, is reported to have stated that she was valued at \$50,000 and was uninsured. She was built at Glasgow, Scotland, in 1877, and was first named *Restigouche*, and later *Rathlin*. Her dimensions were, length 229.7 ft., breadth 31 ft., depth 16.1 ft.; tonnage, 1,189 gross, 705 register, and she was equipped with engine of 180 n.h.p., driving a screw. The Quebec Harbor Commission has refloated the vessel.

Ontario and the Great Lakes.

The concrete breakwater, recently completed, at the entrance of the Mission River at Fort William, was considerably damaged during a heavy storm, Nov. 10.

The Lake Carriers' Association has recommended a draught of 19¼ ft. through the Davis lock at St. Marys Falls in St. Marys River, for vessels bound to Lake St. Clair and Lake Erie ports.

The bell buoy usually stationed at the mouth of the Niagara River in Lake Ontario, and which broke from its moorings at the end of October, is not to be replaced until the reopening of navigation in 1916.

The Great Lakes Steamship Co. is having a vessel built at Toledo, Ohio., at a cost of about \$450,000. It will be 600 ft. long over all, 580 ft. between perpendiculars, 60 ft. beam and 32 ft. deep, and about 12,000 tons gross.

The Marine Department announces the completion of the dredging of the entrance to the Kaministikwia River, in Thunder Bay, to a depth of 25 ft. and a width of 600 ft. The channel has been swept and the buoys rearranged.

The Marine Department announces that only the south half of the dredged channel at the entrance to the Kaministikwia River, Fort William, carries a depth of 25 ft. The north half, or older part of the channel, has a safe depth of 21 ft.

Canada Steamship Lines s.s. *Martian*, while proceeding to the Empire elevator at Port Arthur, Nov. 5, with a partial cargo, collided with the dock and damaged six plates. It was not found necessary to drydock her, part of her cargo being lightered, and the repairs made.

The Marine Department has completed the alterations to the back range lighthouse at Owen Sound. The lighthouse is a square steel skeleton tower with sloping sides, surmounted by two lanterns showing a fixed

white light at an elevation of 92 ft., visible for 15 miles in the line of the range.

The strong winds in the early part of November caused considerable damage in the neighborhood of the Sault Ste. Marie canals. The cofferdam at the head of the Worth lock was torn away, and the swing bridge was put out of business. Traffic was not interfered with on this account, as very little shipping was moving.

A charge in the Toronto Police Court, against Canada Steamship Lines, Ltd., for permitting smoke to be emitted from the funnels of vessels while lying at the Toronto wharves, was dismissed, Nov. 8, it being held that steamships, being under Dominion control, were not amenable to the provisions of civic bylaws.

The United States Lake Survey reports the levels of the Great Lakes in feet above tide water for October, as follows,—Superior, 602.75; Michigan and Huron, 579.81; Erie, 571.99; Ontario, 245.17. As compared with average October levels for the past ten years, Superior was 0.09 ft. above; Michigan and Huron, 0.75 ft. below; Erie, 0.14 ft. below, and Ontario, 0.70 ft. below.

The Rutland Transit Co., which formerly operated steamships on the Great Lakes and to Ogdensburg, N.Y., has sold the last of its vessels, the *Rutland* and *Ogdensburg*, to the Pacific Alaska Navigation Co., Seattle, Wash. The company was owned by the Rutland Rd., which was ordered by the Interstate Commerce Commission to sever its connection with its steamship line, the same not being in the public interest.

The Canadian Stewart Co.'s steam tug A. M. Stewart was launched at Leith, Scotland, recently, and it is reported that two other similar tugs are being built there for the same firm. The dimensions of the A. M. Stewart are, length overall 110 ft., length between perpendiculars 104 ft., breadth 26 ft., depth moulded 14 ft. She is equipped with engine of 900 h.p., and has steam windlass, steam capstan, salvage crane, and complete electric light plant with powerful searchlight.

The s.s. W. D. Rees, of Fairport, Ohio, when drawing 18½ ft. of water, struck in the approach to Key Harbor, Georgian Bay, Nov. 4. Her cargo was lightered before she could be released. The obstruction struck is described as a flat rock with six or seven fathoms of water close to, and situated 240 ft. southeast and abreast of a black spar buoy south of Pratt Island, very close to the middle of the channel marked by the alignment of the Wedge Island range day beacons.

Canada Steamship Lines' steam tug Frank C. Barnes, which left Port Dalhousie, Nov. 1, for Montreal, has been lost with her crew of five. No word was heard of her after sailing, and every effort to trace her has failed. She was formerly owned by the Canadian Towing and Wrecking Co., Port Arthur, and was built at Manistee, Mich., in 1869, and rebuilt in 1892. She was of oak and equipped with non-condensing engine of 240 h.p. Her dimensions were, length 66 ft., breadth 16 ft., depth 8 ft., tonnage 60 gross, 43 register.

The Montreal Transportation Co. has ordered steamship of the single deck, bulk freight type, with double bottom and side ballast tanks, to be built at Collingwood, for delivery by Oct. 1, 1916. The dimensions will be: length over all, 550 ft.; length between perpendiculars, 537 ft.; breadth moulded, 58 ft.; depth moulded, 31 ft. She will be equipped with vertical triple expansion engines, with cylinders 24, 40 and 66 ins. diam., by 42 ins. stroke, supplied with steam by 3 Scotch boilers 13 by 11 ft., at a working pressure of 185 lbs.

The Nipissing-Pontiac Steamboat Co.'s s.s. *Aileen* foundered in Lake Timiskaming, Nov. 11, when en route from Haileybury to North Timiskaming. Apart from the fact that there was a stiff gale on the lake, nothing is known as to the causes of the disaster. The vessel was a small one and carried three of a crew, and one passenger, all of whom lost their lives. The *Aileen*, which was formerly owned by the Upper Ontario Steamboat Co., was built at Perth, Ont., in 1904, and was screw driven by engine of 4 n.h.p. Her dimensions were: length, 68.8 ft.; breadth, 11.8 ft.; depth, 4.4 ft.; tonnage, 38 gross, 24 register.

British Columbia and Pacific Coast.

The Victoria Shipping Co., Ltd., Victoria, B.C., is being voluntarily wound up, with J. H. Lawson as liquidator.

The C.P.R. s.s. *Princess Victoria* was withdrawn from service during the last week of October for repairs and general overhaul. Her place on the triangular route was taken by the s.s. *Princess Charlotte*.

The C.P.R. steamship service on the Arrow Lakes will be three days a week during the winter, southbound vessels leaving Arrowhead Tuesdays, Thursdays and Saturdays, and West Robson, Tuesdays, Thursdays and Saturdays.

The Alaska Steamship Co.'s s.s. *Mariposa*, which stranded at Bella Bella, while bound from Seattle, Wash., to Alaska ports, recently, was refloated Nov. 3, and taken to McLaughlin Bay. She is reported to have been insured on a value of \$250,000.

The C.P.R. has lost its appeal at Vancouver, in a case where judgment was given against it for damage to the s.s. *Lady Lake*, when, in placing a new boiler in her, the crane slings broke and the boiler, which was also damaged, crashed through the deck.

H. Kemp, formerly Secretary-Treasurer, North Vancouver Ferries, Ltd., who sued the company recently for salary from the time of his dismissal in 1913 to Jan., 1915, has been awarded \$433 and costs, covering salary from his dismissal to his appointment to another position, as it was considered that his summary dismissal was not justified.

The Vancouver Portland Cement Co.'s s.s. *Leona* foundered in the Gulf of Georgia, Oct. 30, and seven of the crew were reported missing. She was bound for Tacoma, Wash., with ore and was caught in a heavy sea. She was built at Paisley, Scotland, in 1905, her hull being of steel, with dimensions, length 185 ft., breadth 30 ft., depth 11½ ft.; tonnage, 700 gross, 308 register.

At a meeting of representatives of financial and shipping interests in Vancouver, Nov. 5, a resolution was passed urging the Dominion Government to appoint a customs officer at New York, to deal with shipping to British Columbia ports via the Panama canal, and also urging the encouragement of the westward movement of grain for shipment through British Columbia ports.

The Alaska Steamship Co.'s s.s. *Mariposa*, which ran ashore on a reef near Napier Point in Lama Passage, off Campbell Island, Oct. 8, was floated and beached in McLaughlin Bay, where temporary repairs were made early in November, after which she proceeded to Seattle, Wash., accompanied by the tug *Salvor*, for complete examination and repairs.

The C.P.R. has filed objections to the Vancouver Harbor Commission's reclamation scheme so far as the work in False Creek in concerned, on the ground that its land on the south shore would be injuriously

affected by an eddy which it is claimed would be formed between the island and the south shore, by reason of the channel being blocked by the approach from the end of Granville St.

Capt. H. Smith, of the steam tug *Constance*, was fine \$100, at Vancouver, Nov. 5, for carrying passengers, and a further \$50 for towing a launch, in contravention of the laws regarding steam tugs. In the course of the trip during which the offences took place, the tug was lost. The captain pleaded that he was unaware that the men were on his vessel, and to back him up, he referred to his report of the loss of the vessel, where he referred to them as stowaways. The case is of considerable local interest, owing to the general practice of carrying parties of loggers on steam tugs going up for logs.

The bylaw providing for the ultimate municipalization of the ferry service at West Vancouver, operated by the West Vancouver Ferry Co., was defeated, Nov. 1. The company has not been a paying concern, and there has been constant difficulty in financing it. Immediately following the defeat of the proposed bylaw, the company reduced the service to one boat, and gave all employees one month notice. The fare was also raised 25%. It is stated that there is a strong probability that the company will cease business at the end of the 30 days notice. The position is rather a peculiar one, as all the shares are held by the municipality.

The Minister of Public Works inspected the Government works in progress in Vancouver harbor, Nov. 16. He stated that a building would be erected on the recently completed Government dock, and a wharf would be constructed in front of the immigration building, which is almost completed. The erection of other buildings at various points will come up for consideration later on. On the same day he was waited on by representatives of the Board of Trade and the North Vancouver City Council in connection with the projected dry dock, for the construction of which the Amalgamated Drydock and Shipbuilding Co. has been promised a Government subsidy.

The Loss of the s.s. De Sola.—The Reid Donald Steamship Co., Montreal, is suing C. Tennant and Sons Co., New York, for \$350,000 for the loss of the s.s. *De Sola*, which was destroyed by explosions and fire caused by the escape of concentrated sulphuric acid, which was being conveyed from New York to Ardrossan, Scotland, in the s.s. *De Sola* while under charter to the defendant company. The circumstances connected with the disastrous voyage were detailed in Canadian Railway and Marine World for April.

The Loss of the s.s. Hesperian.—When the Allan Line s.s. *Hesperian* was sunk off the Irish coast on Sept. 4, there seemed to be considerable doubt as to whether she had been the victim of a mine, or had been torpedoed by a German submarine. A press dispatch stated recently that the Navy Department at Washington had announced that a fragment found on board the vessel and removed by one of the passengers, had been definitely recognized as a part of a torpedo.

New Russian Arctic Port.—A recent press report from Paris, France, states a railway has been completed from Petrograd, Russia, to the harbor built recently at Ekaterina, on the edge of the Arctic circle, on the northern coast of the Gulf of Kola. The port is said to be free from ice the year round. The railway is 1,200 miles, and was built in six months by about 10,000 men, mostly war prisoners, under the direction of American engineers.

Government Steamships on Hudson Bay Route.

Ottawa press despatch, Nov. 19 (unconfirmed): "A Government owned line of steamers out of Hudson Bay will be established, it is understood, on the completion of the line and the terminals at Canada's new northern port and will be in operation in time to carry part of the 1917 wheat crop to its destination overseas it is hoped. Work on the construction of the line is being expedited with a view to completing the laying of steel by the fall of next year. If this is done as stated, the route will be in a position to compete for the movement of the Canadian grain crop in 1917. On account of the prejudice against the route by the results of careless navigation in Hudson Bay, it is expected that insurance rates will at first be so high that it will be necessary for the Government to operate its own line of steamers. This, it may be stated, will, according to present intentions, be done."

In reference to the above we are officially advised that at present there is nothing in the report that a Government line of steamships is to be established to connect with the Hudson Bay Railway, and that the matter is entirely one for the future.

Mainly About Marine People.

C. L. Monroe has been appointed agent, Pacific Coast Steamship Co., Prince Rupert, B.C., vice J. H. Rogers.

H. Maitland Kersey, Manager in Chief, Ocean Services, Canadian Pacific Ry., London, Eng., is in Canada on a business trip.

J. L. Michaud, A.M.Can.Soc.C.E., who died at Montreal, Nov. 14, aged 64, was for 13 years Chief Engineer, Dominion Public Works Department, there.

A. Angstrom has been appointed Naval Architect, Canadian Northern Ry., with office at Toronto. His first work is the designing and supervision of building of a car ferry to run between Steveston and Patricia Bay, B.C.

Clark Hamilton, who died at Kingston, Ont., Nov. 10, was for some years prior to 1882, when he was appointed Collector of Customs, engaged in steamboat business, and commanded the s.s. *Kingston* when the late King Edward, then Prince of Wales, sailed up the St. Lawrence in 1860.

Charles Hughes, who died at Montreal West, early in November, formed a link with the period of Lower Canada and early navigation on the St. Lawrence River. His father was agent at Three Rivers for the Molson line of steamships, and he was for some time a purser on one of those vessels.

Capt. C. T. Knowlton has been appointed Superintendent of Ferries, Canadian Government Railways, in charge of floating equipment. Employes on all floating equipment report to and receive instructions from him, and he reports to the General Superintendent, Intercolonial Ry. Office, Moncton, N.B.

Major Adolphe V. Roy, M.Can.Soc.C.E., formerly Vice President, Sincennes-McNaughton Line, Ltd., Montreal, whose death while performing a heroic action at the front was mentioned in our last issue, is stated to be amongst those recommended for the Victoria Cross. There are several precedents for such a posthumous award.

A. Gordon, at present Lieutenant-Engineer, R.N.R., of H.M.S. *Jupiter*, and formerly Chief Engineer s.s. *Princess Charlotte*, B.C. Coast Service, C.P.R., Vancouver, B.C., has been awarded the Russian Imperial Order of St.

Anne, third class, for services, while engaged in keeping the port of Archangel open last winter under exceptional difficulties.

Capt. J. V. Forster, R.N.R., who has been appointed General Superintendent, Canadian Pacific Ocean Services, Ltd., formed by the C.P.R. steamships and the Allan Line, Liverpool, England, spent his early years at sea in the ships *Highfield* and *Milton Stuart*. In 1889 he entered *Elder Dempster and Co.'s* service as second mate on the s.s. *Yola*, and three years later was given command of the s.s. *Ashanti*, and a year later transferred to the s.s. *Mount Temple*. The first two vessels were engaged in the West African trade, and the last in the Canadian trade, and it was eventually acquired by the C.P.R. when it took over the *Beaver Line* to form the nucleus of its fleet. In 1913 he was presented with a gold watch and chain by the President of the United States for services rendered in rescuing the crew of the schooner *Percy and Lily* when the vessel foundered in mid-ocean. He succeeded Capt. H. Mowatt as Marine Superintendent, C.P.R., at Liverpool in 1913.

Emigration and Military Service.—Various reports have been cabled from England recently, as to the large numbers of men of military age, who are emigrating from Great Britain and Ireland, with a view to avoid possible compulsory military service. Enquiry at the Canadian Emigration Office, London, England, proves that so far as Canada is concerned, there is no truth in the reports, as from the commencement of the war, emigration has been discouraged, and enquiries from men of military age do not average six a month. This policy is strictly followed out also at the C.P.R. and G.T.R. offices; in fact, if a young man of service age makes such enquiries, he is referred to a recruiting sergeant.

The Regional Construction Co., Ltd., has been incorporated under the Dominion Companies Act, with \$100,000 authorized capital and office at Montreal, to carry on business as contractors and builders of railways, telegraph, telephone and transmission lines, canals, bridges, wharves and all kinds of public works. The incorporators are C. G. Hebert, A. Laberge, E. H. Godin and J. E. Morier, Montreal, and E. Lambert, St. Jacques des Piles, Que.

The Hillsborough Plaster, Quarrying and Manufacturing Co. has been incorporated under the New Brunswick Companies' Act to build railways, aerial and other tramways, to be operated by steam, electricity or other power, in connection with its quarries. The company has a capital of \$49,000; its office is at Hillsborough, N.B., and its provisional directors are:—J. Blight, Mrs. I. C. Blight, J. L. Peck, C. W. McLatchy, Hillsborough; J. N. Smith, Coverdale, N.B.

The Imperial Oil Co. has been granted a supplementary charter under the Dominion Companies Act, authorizing it to increase its capital stock from \$15,000,000 to \$50,000,000, and to extend its powers in various directions, including the power to lease or otherwise acquire railways necessary for its purposes, and to lay tracks on lands owned by it, and to own rolling stock.

Quinlan and Robertson, Ltd., contractors, Montreal, originally incorporated with \$2,000,000 authorized capital, have had it reduced to \$1,000,000 by supplementary letters patent issued under the Dominion Companies Act.

Already 300 miles of the 1,000 miles of railway across Australia, recommended by Lord Kitchener during his visit to the Commonwealth, for strategical purposes, has been built, and it is expected that the line will be finished by the end of 1916.

Among the Express Companies.

The Board of Railway Commissioners has approved the Central Canada Ex. Co.'s standard mileage tariff of maximum tolls C.R.C.I.

Since the commencement of the war, 55 employes of the Dominion Ex. Co., in Manitoba and Saskatchewan have enlisted for active service.

The Canadian Northern Ex. Co. has opened offices at Rosebank, Man., Krydor, Canora, Mazenod, Mikado and Spring Valley, Sask.

F. Robertson, a former agent for the Dominion Ex. Co., at Windsor, Ont., has recently pleaded guilty, with extenuating circumstances, to the theft of \$615 from the company.

The Dominion Ex. Co. has opened offices at Mason, Two Creeks and Meadows, Man.; Alida, Vidora, Belbeck, Beverly, Archive and Blucher, Sask.; Lomond, Purple Springs and Whittle, Alta., and Rock Creek, B.C.

The Board of Railway Commissioners has approved the Canadian Northern Ex. Co.'s standard tariff of maximum express tolls, C.R.C. 834, to apply on the C.N.R.'s Mountain Division, west of Tollerton, Alta.

The Rochon Express Co., Ltd., has been incorporated under the Quebec Companies Act, with \$20,000 capital and office at Montreal, to transport merchandise on vehicles and vessels of all kinds, and to carry on a general express and transportation business.

H. H. Hines, agent, Jas. Todd, cashier, Canadian Ex. Co., Parkdale, Toronto, and W. Ellis, were each sentenced to one month imprisonment at Toronto, Nov. 10, for the theft of \$2,140 from the company, by the manipulation of rates. The money obtained has been refunded.

Canadian Ex. Co.'s results for the year ended June 30, compared with those for the previous year are as follows:—

	1914-1915.	1913-1914.
Charges for transportation	\$3,117,113	\$3,341,340
Express privileges, Dr.	1,554,427	1,666,472
Operating other than transportation	60,570	114,732
Total operating revenue	1,623,255	1,789,599
Operating expenses	1,536,528	1,661,834
Net operating revenue	83,726	127,765
Express taxes	51,948	28,949
Operating income	31,677	38,816

Central Canada Express Co., Ltd., has been incorporated under the Dominion Companies Act, with \$100,000 authorized capital and office at Winnipeg, to transport for hire to and from places in Canada and elsewhere, merchandise and money, etc., and for such purposes to own, charter and operate steam and other vessels, cars and vehicles, and to carry on the general business of an express company. The incorporators are J. D. McArthur, President; D. W. Campbell, Assistant Secretary-Treasurer, Edmonton, Dunvegan and British Columbia Ry., and Central Canada Ry.; and W. P. McDougall and A. B. Donley, Winnipeg, and J. K. McLennan, Secretary-Treasurer, Edmonton, Dunvegan and British Columbia Ry., and Central Canada Ry., Edmonton, Alta. Peter McArthur has been appointed General Superintendent, with office at Edmonton, Alta.

Telegraph, Telephone and Cable Matters.

The Great North Western Telegraph Co. has taken an office in the Northern Crown Bank Building, Regina, Sask., and is making additions to its equipment there.

The Dominion Government telegraph line across Hastings Arm, Observatory Inlet, B.C., has been replaced by a cable from Larcom Island to the main land at approximately the same point as the wire, which has been removed.

The C.P.R. Telegraphs has opened a branch telegraph office at 2115 Granville St., Vancouver, B.C., for handling business from the West Fairview, Kitsilano and False Creek districts.

During a heavy storm throughout the Maritime Provinces, Nov. 5 and 6, telegraph business suffered considerable dislocation, in fact all the companies operating overhead wires had to keep large gangs of men out for some time repairing wreckage.

Subsequent to the annual meeting of Grand Trunk Pacific Telegraph Co. shareholders at Montreal recently, details of which are not made public, H. Hulatt, Manager of Telegraphs, G.T.R. and Grand Trunk Pacific Ry., was elected a director of the company.

Referring to the report mentioned in Canadian Railway and Marine World for November, to the effect that G. D. Perry, General Manager, Great North Western Telegraph Co., had stated in Vancouver that his company purpose stringing a double copper line between Montreal and Vancouver for commercial business, we are officially advised that his statement was misinterpreted. It was stated that if it had not been for the heavy advance in the price of copper, the company would probably have erected a copper wire between Montreal, Toronto and Vancouver. With the present prices prevailing, the cost of the wire would be about \$275,000, and the total expense about \$300,000. The proposition is therefore held over for the present, and it is unlikely that any action will be taken until the copper market becomes normal.

The Grand Trunk Pacific Telegraph Co. has been appointed Supervisory Agent of telegraphs for the National Transcontinental Ry. between Moncton, N.B., and Winnipeg, including the Lake Superior Branch to Fort William, Ont., with jurisdiction over all matters appertaining to the construction and maintenance of telegraph and telephone lines and the operation of railway and commercial telegraphs, the following officers having jurisdiction:—H. Hulatt, Manager of Telegraphs, G.T.R. and G.T.P.R., and Thomas Rodger, Supervisor, G.T.R., Montreal, and F. T. Caldwell, Division Superintendent of Telegraphs, G.T.P.R., Winnipeg.

The Great North Western Telegraph Co. has opened offices at Agate, Banning, Bolger, Caledonia, Capreol, Devlin, Dorion, Fire River, Foleyet, Glenorchy, Hillspport, Hornepayne, Huronian, Jellicoe, Longuelac, Mille Roches, Nipigon, Oba, Orient Bay, Ruel, Stackpool and Strathcona, Ont.; Badger, Berton, Deloraine, Lorette, Neelin, Rosebank and Vista, Man.; Birdview, Canwood, Chandler, Dumblane, Estevan, Ettington, Mazenod, Mikado, Palmer, Parkside, Parry, Richard, St. Gregor, Spring Valley and Yorkton, Sask.; Excel, Rumsey and Sibbald, Alta.; and has closed its offices at Little Metis Beach, Manoir Richelieu, Pointe au Pic and Valcartier Camp, Que.; Bala Park, Bobcaygeon, Camden East, Chaffeys Locks, Deux Rivieres, Dwight, East Don, Grimsby Beach, Hagersville, Mackeys Station, Mat-tawa, Port Cockburn, Rosseau, Sparrow Lake and Stonecliff, Ont.; and at Sarcee Camp, Calgary, Alta. The names of the following offices have been changed, Shawinigan Jct., Que., to Aldred; Laframboise, Ont., to Alfred Centre, and Mayflower, Ont., to Flanders.

Over 500,000 lbs. of fresh halibut were landed at Prince Rupert, B.C., recently in two days, according to a press dispatch. Seventeen carloads of the fish were sent east on two Grand Trunk Pacific trains.

Furness, Withy and Co., Ltd., have declared a dividend of 2½% for the quarter ended Sept. 30.

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.

Canadian National Carbon Co., Ltd.—J. M. Spangler, formerly with the Railroad Supply Co., Chicago, is now connected with the Canadian National Carbon Co.'s sales department.

The Trolley Supply Co., Canton, Ohio, has issued a bulletin describing and illustrating The Perfect Headlight for interurban cars, which is made entirely from 20 gauge pressed steel, the reflector being 12 ins. in diameter in the front and 6 ins. deep.

Northey-Simmen Signal Co., Ltd.—Supplementary letters patent have been issued under the Ontario Companies Act, reducing this company's capital stock from \$5,200,000 to \$1,160,000. The company is to be merged with the newly incorporated Diaphone Signal Co., Ltd.

Goldschmidt Thermit Co.—The issue of Reactions for the third quarter of the year describes a number of interesting repairs carried out by the thermit welding process, both in railway and marine shops, and an article comparing the results of welding by thermit and by electricity, as adapted to locomotive frames and other heavy sections.

The Coleman Fare Box Co., Ltd., Toronto, has received orders recently for its new no. 4 stationary fare box from the Three Rivers Traction Co., Three Rivers, Que.; Toronto Civic Car Lines; Sandwich, Windsor & Amherstburg Ry., Windsor, Ont.; and Guelph Radial Ry., Guelph, Ont.; and for portable boxes from the Sudbury-Copper Cliff Suburban Electric Ry., Sudbury, Ont.; and the St. John Ry., St. John, N.B.

The Diaphone Signal Co., Ltd. has been incorporated under the Dominion Companies Act, with \$825,000 authorized capital and office at Toronto, to manufacture and deal in all kinds of signal devices and with other powers. The company will absorb the businesses of the Northey-Simmen Signal Co., Ltd., Diaphone Signal Co., a New Jersey corporation, the Canadian Fog Signal Co., Ltd., and Northey-Plummer Ltd., of which J. P. Northey, of Toronto, is President.

Transportation Conventions in 1915-16.

- Dec. 7-10.—American Society of Mechanical Engineers, New York, N.Y.
- Dec. 14.—Association of Transportation and Car Accounting Officers, St. Louis, Mo.
- Jan. 18-20, 1916.—American Wood Preservers' Association, Chicago, Ill.
- March 21-23, 1916.—American Railway Engineering Association, Atlantic City, N.J.
- May, 1916.—International Railway Fuel Association, Chicago, Ill.
- May 2-5, 1916.—Air Brake Association, Atlanta, Ga.
- May 19, 1916.—Association of Railway Claim Agents, Atlantic City, N.J.
- June 20-22, 1916.—Association of Railway Telegraph Superintendents, St. Paul, Minn.
- June 20-23, 1916.—American Association of Freight Agents, Cincinnati, Ohio.
- June 21, 1916.—Train Despatchers' Association of America, Toronto.
- June 21, 1916.—American Association of General Baggage Agents, Boston, Mass.
- June 28, 1916.—Association of American Railway Accounting Officers, Detroit, Mich.
- August, 1916.—International Railroad Blacksmiths' Association, Chicago, Ill.
- September, 1916.—Master Car and Locomotive Painters' Association of United States and Canada, Wilmington, Del.
- September, 1916.—Railway Signal Association, Mackinac Island, Mich.
- Sept. 19-22, 1916.—Roadmasters and Maintenance of Way Association, Chicago, Ill.

Transportation Associations, Clubs, Etc.

The names of persons given below are those of the secretaries unless otherwise stated:
 Canadian Car Service Bureau—J. Reilly, 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 month, 8.30 p.m., except June, July, and August.

Canadian Society of Civil Engineers—C. H. McLeod, 176 Mansfield St., Montreal.
 Canadian Ticket Agents' Association—E. de la Hooke, London, Ont.
 Dominion Marine Association—F. King, Counsel, Kingston, Ont.
 Eastern Canadian Passenger Association—G. H. Webster, 54 Beaver Hall Hill, Montreal.
 Engineers' Club of Montreal—R. W. H. Smith, 9 Beaver Hall Square, Montreal.
 Engineers' Club of Toronto—R. B. Wolsey, 94 King Street West, Toronto.
 Express Traffic Association of Canada—W. H. Burr, Chairman, Toronto.
 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.
 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.
 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.

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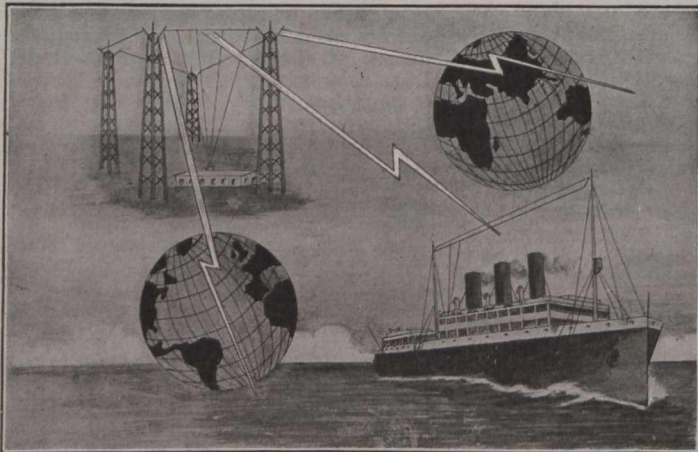
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