

# Canadian Railway and Marine World

February, 1917.

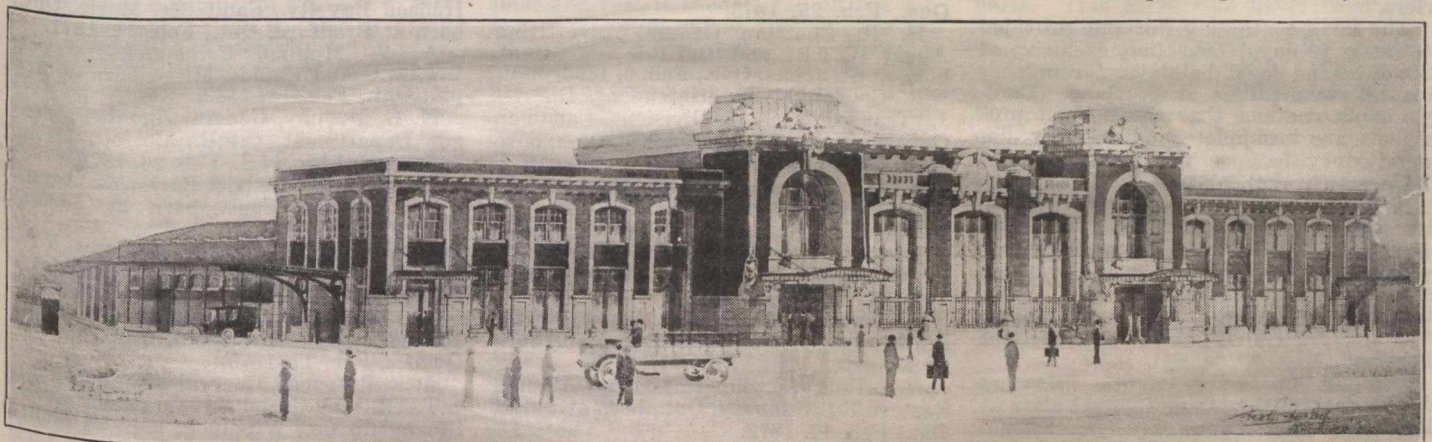
## Great Northern Railway Terminals in Vancouver.

In connection with the erection of its terminals at Vancouver, B.C., the Vancouver, Victoria & Eastern Ry., a subsidiary of the Great Northern Ry., U.S.A., has filled in the whole of the area from the southern boundary of the property, which it purchased from the city, to the shore line on the north side of False Creek. This area was previously part of the bed of False Creek. The average depth of the fill required to bring the property up to the approximate level of Main St. was about 12 ft. The company also owns considerable property on the south side of False Creek.

The Passenger Station, which is about completed, is L shaped, the main front facing west. It is about 375 ft. east of Main St. As the whole property is a fill, the building is supported on a pile foundation, cluster piles being driven and cut off below the line of perpetual satura-

tion. There are two principal entrances to the main waiting room from the west, directly opposite to which are two entrances leading to a glass covered concourse, running the full length of the building, which in turn leads to 11 tracks, the platforms being covered by umbrella roofs, 700 ft. long. Off the main waiting room in the south wing are located the smoking room, which has access to the concourse, women's retiring room and lavatories. Provision is also made in the south wing for an immigrants' room and lavatories, but having no connection with the main waiting room. A corridor, 12 ft. wide, runs down the centre of the north wing to a carriage entrance. Off the waiting room in the north wing is the parcels and news office and station master's validating and information offices. Off the corridor leading to the carriage entrance are an exhibition room, a room for sta-

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



Passenger Station at Vancouver for Great Northern and Northern Pacific Railways' Joint Use.

tion. Upon these concrete piers were poured, which support reinforced concrete beams, which in turn carry the exterior walls, columns and floors. The skeleton of the building is reinforced concrete, hollow tile, and concrete floors and roof. The exterior has a granite base, carrying up and around all exterior doors terracotta surbase, and red brick above, with terra-cotta trimmings and cornice.

The centre portion, 45 ft. high, and ap-main waiting room, 60 x 100 ft., which runs the full height. Flanked on either side are two wings, about 56 x 65 ft, two stories high. The upper floors of the wings will be used by the Great Northern and Northern Pacific Railways for offices.

The main waiting room will be panelled in Alaska marble, 7 ft. high, and will have marble and terrazzo floors and ornamental plaster ceiling. Provision has been made in the plastering of the end walls for placing oil paintings showing the Glacier and Yellowstone National Parks. The lighting fixtures are of special design, and will be executed in plaster. Alcoves off the main waiting room will be fitted with seats and tables for the public. The ticket office is in the centre of the east wall, opposite the two main

tion officials and a checking lobby which is connected direct to the baggage room.

The leg of the L, or baggage room wing, is a one story building containing the baggage room, bonded baggage, Canadian and United States customs, trainmen's room, lavatory, mail room, Great Northern and Northern Express. The leg of the L is about 228 ft. long by 42 ft.

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

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

There are two freight sheds, the Great

grade a granite base, brick with terracotta trimmings, wooden floors.

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

In connection with the passenger car yards there will be built a commissary building, 100 x 40 ft.; an oil house, 20 x 20 ft.; car repairers' building, 30 x 20 ft.; car foreman's building, 20 x 12 ft.; car cleaners' building, 16 x 20 ft.; carpet cleaning building, 16 x 20 ft., and a coal house, 40 x 20 ft.

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

## Grand Trunk Railway Demurrage Regulations at Portland.

The Interstate Commerce Commission gave the following judgment recently in a case against the G.T.R.:—Complainants are the National League of Commission Merchants of the United States, a corporation, with its principal office at New York, N.Y., and certain produce dealers of Boston, Mass., members of the complainant named. They allege that defendant's demurrage regulations governing carload shipments of apples and vegetables awaiting transshipment at Portland, Me., are unreasonable and unjustly discriminatory as compared with the demurrage regulations of the Maine Central Rd. governing such shipments at the same port. The evidence adduced relates only to regulations governing shipments of apples. Reparation is asked for demurrage charges collected at Portland on certain shipments of apples in 1914 and 1915. The shipments described in the complaint originated at points in Maine, either on defendant's line or on the Maine Central Rd., and were delivered by defendant. Demurrage charges were collected at Portland in accordance with the following tariff rules:—"Cars containing freight for transshipment to vessel will be allowed such free time at the port as may be provided in the tariffs of carriers."

The tariff containing this rule provided 48 hours (2 days) free time, exclusive of Sundays and legal holidays, for unloading all commodities at Portland. Complainants contend that these tariff provisions are incomplete and unjustly discriminatory because the Maine Central Rd.'s tariff, applicable at Portland, contains the following rule:—"Demurrage on transhipped traffic: Ten days free time (including Sundays and legal holidays) will be allowed for unloading carload shipments forwarded by water, where there are no through rates, viz.: Apples \* \* \* for transshipment to vessels at Portland, Me. \* \* \*"

Regular line trans-Atlantic steamers do not dock at the Maine Central piers at Portland. That is done only by occasional vessels specially chartered. Complainants therefore are compelled as a rule to use the G.T.R. facilities to effect transshipment of their apples. The mere fact that defendant's demurrage regulations at Portland are different from those of the Maine Central Rd. does not establish unlawful discrimination. An allowance of more than 10 days free time was insisted upon by complainants at the hearing. They urge that this free time is necessary, as the steamships frequently are unable on account of weather conditions to arrive on scheduled time. The average detention at Portland on the shipments was approximately 7 days, exclusive of Sundays and legal holidays; the minimum time was 3 days and the maximum 39 days. Complainants showed that 30 days free time applied at Boston, New York, Philadelphia, and Baltimore, on shipments of apples awaiting transshipment, and, in general, on all freight for export. Since the hearing the free time allowance at the points named applicable on shipments for export moving on local bills of lading to the respective ports has been materially reduced. The circumstances and conditions obtaining at Portland are not shown to be similar to those obtaining at the larger eastern ports, nor is it disclosed what would be a reasonable free time allowance at Portland. No evidence was adduced to show why any of

the shipments in issue were detained beyond the free time, except the general statements that tentative bookings were sometimes cancelled and weather conditions sometimes delayed the steamships.

We find that the demurrage regulations in issue are not shown to be or to have been unreasonable or unduly prejudicial. At the hearing complainants sought to enlarge the scope of the complaint by in-

jecting an issue of undue prejudice predicated on defendant's practice of imposing no demurrage charges at Portland on shipments of apples from Canadian points for export, while contemporaneously exacting such charges at Portland on shipments from points in Maine. This issue was not raised by the pleadings and will not be considered. An order will be entered dismissing the complaint.

## Birthdays of Transportation Men in February.

Many happy returns of the day to:—

B. H. Bennett, General Agent, Chicago & North Western Ry., Toronto, born at Cobourg, Ont., Feb. 6, 1858.

F. L. C. Bond, Division Engineer, Eastern Lines, G.T.R., Montreal, born there Feb. 21, 1877.

T. Britt, General Fuel Agent, C.P.R., Montreal, born there Feb. 3, 1871.

G. E. Bunting, General Western Freight Agent, Allan Line Steamships, and Manager, Allan & Co., Chicago, Ill., born at Toronto, Feb. 8, 1873.

J. S. Byrom, General Superintendent, Sleeping, Dining and Parlor Cars, and News Service, Eastern Lines, C.P.R., Montreal, born at Jersey City, N.Y., Feb. 10, 1872.

J. J. Callahan, Superintendent, Oshawa Ry., Oshawa, Ont., born at New Glasgow, Que., Feb. 25, 1875.

H. R. Charlton, General Advertising Agent, G.T.R. and G.T.P.R., Montreal, born at St. Johns, Que., Feb. 9, 1866.

R. Colclough, Superintendent, District 1, Transcontinental Division, Canadian Government Railways, Quebec, Que., born at Bic, Que., Feb. 24, 1871.

F. W. Cooper, A.M.Can.Soc.C.E., ex-Superintendent, Schreiber Division, Algoma District, C.P.R., now Manager, Track Specialty Department, W. W. Butler Co., Montreal, born at London, Ont., Feb. 16, 1880.

R. Crawford, Northwest Agent, Northern Navigation Co., Winnipeg, Man., born at Kingston, Ont., Feb. 21, 1870.

A. J. Donegan, Superintendent, Algoma Eastern Ry., Sudbury, Ont., born at Perth, Ont., Feb. 17, 1872.

R. W. Drew, Division Freight Agent, Saskatchewan District, C.P.R., Regina, born at Kingston, Ont., Feb. 17, 1874.

E. A. Evans, M.Can.Soc.C.E., ex-General Manager and Chief Engineer, Quebec Ry., Light & Power Co., Quebec, born at Kensington, London, England, Feb. 26, 1855.

Goodwin Ford, General Superintendent, Western Lines, Dominion Express Co., Winnipeg, born at Bordentown, N.J., Feb. 23, 1859.

J. C. Holden, A.M.Can.Soc.C.E., Division Engineer, C.P.R., Winnipeg, born at St. John, N.B., Feb., 1876.

T. C. Hudson, Division Master Mechanic, Quebec Grand Division, Canadian Northern Ry., Joliette, Que., born at Brockville, Ont., Feb. 20, 1873.

H. Hulatt, Manager of Telegraphs, G.T.R. and G.T.P.R., Montreal, born in London, England, Feb. 15, 1883.

C. Gardner Johnson, Lloyd's Agent for British Columbia, Vancouver, B.C., born at Dunblane, Scotland, Feb. 8, 1857.

F. C. Johnson, Night Locomotive Foreman, C.P.R., North Transcona, Man., born at Montreal, Feb. 26, 1885.

John McCraw, General Agent, Central Vermont Ry., New London, Conn., born at Craigvale, Ont., Feb. 6, 1868.

G. L. McCrea, Local Freight Agent, C.P.R., Vancouver, B.C., born at Springtown, Ont., Feb. 9, 1876.

T. McNabb, ex-Master Mechanic, Alberta Ry. & Irrigation Co., now of Picture Butte, Alta., born in Scotland, Feb. 16, 1849.

J. K. McNellie, General Superintendent, Canadian Government Railways, Moncton, N.B., born at Toronto, Feb. 23, 1874.

D. C. Macdonald, Assistant General Claims Agent, C.P.R., Winnipeg, born at Elmsdale, N.S., Feb. 9, 1874.

C. S. Maharg, Superintendent, Brandon Division, Manitoba District, C.P.R., Brandon, born in Dufferin County, Ont., Feb. 4, 1867.

V. J. Melsted, ex-Engineer of Water Service, Western Lines, C.P.R., Winnipeg, born at Gardar, N.D., Feb. 20, 1887.

G. A. Montgomery, Vice President and General Manager, Algoma Central & Hudson Bay Ry., Sault Ste. Marie, Ont., born at Bradford, Ont., Feb. 11, 1871.

A. Z. Mullins, Commercial Agent, G.T.R., Grand Rapids, Mich., born at Appin, Ont., Feb. 14, 1862.

M. G. Murphy, General Agent, Passenger Department, C.P.R., Detroit, Mich., born at Halifax, N.S., Feb. 26, 1878.

J. E. Proctor, District Passenger Agent, C.P.R., Regina, Sask., born at Sarnia, Ont., Feb. 17, 1878.

C. T. Ridalls, Car Foreman, C.P.R., London, Ont., born at St. Heliers, Jersey, Channel Islands, Feb. 8, 1864.

J. E. Robitaille, Treasurer, Roberval-Saguenay Ry., Chicoutimi, Que., born at Quebec, Feb. 17, 1870.

A. E. Rosevear, General Freight Agent, G.T.P.R. and Grand Trunk Pacific Coast Steamship Co., Winnipeg, born at Montreal, Feb. 20, 1863.

J. G. Scott, ex-General Manager, Quebec & Lake St. John Ry., Quebec, born there Feb. 13, 1847.

J. J. Scully, General Superintendent, Algoma District, C.P.R., North Bay, Ont., born at Montreal, Feb. 3, 1872.

G. Spencer, Chief Operating Officer, Board of Railway Commissioners, Ottawa, born in London, Eng., Feb. 21, 1865.

R. H. Sperling, Advisor to the Board, British Columbia Electric Ry., London, Eng., born there, Feb. 9, 1876.

H. E. Suckling, Treasurer, C.P.R., Montreal, born at Gibraltar, Feb. 27, 1851.

Hugh Sutherland, Executive Agent, Canadian Northern Ry., Winnipeg, Man., born at New London, P.E.I., Feb. 22, 1845.

F. L. Wanklyn, M.Can.Soc.C.E., General Executive Assistant, C.P.R., Montreal, born at Buenos Ayres, Feb. 25, 1860.

J. R. Watson, Assistant Superintendent, Sleeping, Dining and Parlor Cars, and News Service, Eastern Lines, C.P.R., Montreal, born at Morpeth, Eng., Feb. 8, 1873.

John L. Weller, M.Can.Soc.C.E., Engineer in Charge, Welland Ship Canal, St. Catharines, Ont., born at Cobourg, Ont., Feb. 13, 1862.

A. Williams, Superintendent, Brownville Division, New Brunswick District, C.P.R., Brownville Jct., Me., born at Mono Road, Ont., Feb. 22, 1872.

# Railway Passenger Car Painting and Varnishing.

By Thomas Marshall, Foreman Painter, Canadian Pacific Railway, Montreal.

The history of paints and varnishes dates back to the dark ages. Even the old Egyptian mummies were wrapped in canvas and sealed with specially prepared gums or varnishes to protect them from the atmosphere; and just as today paints and varnishes are used to protect wood and metal surfaces, they also perform two functions, protecting from weather and beautifying the article they are applied to. In dealing with paints and varnishes, it would be folly on my part to undertake to go into the questions fully, as there can be a great many papers written on the subject, with no end of discussion in connection with them. For instance, there is the chemical end, which treats of the manufacturing of chemical colors and the analysis of the various kinds of paints and varnishes. Then there is the manufacturing grinding and toning of the colors, and, last, but not least, the application of them and the many ways in which they are used and the various articles they are used on. So I will only try to give some idea of how they are used in connection with passenger car painting, and even then it will only be in a very limited way, as it would otherwise take up altogether too much time.

I have had a number of years of experience in the application and use of paints and varnishes, and each day I find something entirely new or different in the working qualities and application of them, as there are so many new methods and conditions changing as time rolls on. The average person seems to have but a vague idea of the trouble experienced in connection with the painting and finishing of any article, as the majority of people think paint is only paint and anyone can apply it. Many are not familiar with the ordinary trade names, as was the case of a hardware clerk, when a painter went into a hardware store and asked him if he had any drop black ground in Japan, and after looking over his stock, he said: "Well, we have not any ground in Japan, but we have some ground in Montreal by the Canadian Paint Co." It may be true that anyone can apply paint or varnish, but the point is to have it applied so as to give a satisfactory finish both in appearance and wear. When I say a satisfactory finish they are big words, as there are so many different opinions as to what constitutes a finish. I will venture to say that if you were to ask the average manufacturer of autos, carriages, or railway cars, etc., whose product requires a high grade finish, what part of the factory caused him the greatest trouble and annoyance, he will invariably say the painting and finishing. It is a well known fact that paints and varnishes are very much like the human system, they are affected by the weather conditions, such as heat, cold, dampness, drafts, etc., and our climate during our shopping season is subject to changes and extreme conditions, any one of which may cause endless trouble to the painter.

Paints and varnishes are used very extensively on practically every article you can think of, from the steamship that plies the ocean, the railway train that covers the land, down to the bed you sleep on. Of course, they are used in some lines of manufacture more than in others. For instance, the electric manufacturers use them in quantities for insulating and impregnating of coils, armatures, transformers, tapes, and wires, and the carri-

age manufacturers in various ways for the finishing of their product. The railways use them for all their equipment and for various other purposes. My experience has taught me that each manufacturer has a special way of treating his particular goods, therefore it would be poor policy to employ the same methods to finish a carriage as you would a house, and you can readily understand why there is such a great variety of classes of painting.

Now that steel is becoming more extensively used two different systems of exterior car painting are necessary, one for the wood car and one for the steel; this principally applies to the preparation of the foundation and priming of first coats. One of the most essential principles in the finishing of wood cars is to see that the wood is properly seasoned, kiln dried and painted on the under side with a good oil paint, as the least particle of dampness will cause more or less trouble. After this has been done, the succeeding coats are simply a question of skill, the main point is to see that each coat is properly treated, until the car is finally completed. In the case of a steel car it is necessary to see that all grease smut and rust is sandblasted off the surface of the steel before applying the primer. After this is done, it is carried to completion in very much the same manner as the wood car, except that, if the steel is smooth, it does not require the same number of coats of paint, as the absorption is not as great as in the case of wood.

As every part of a coach is finished by various processes we will start with the top or roof. Before the application of a new canvas roof, it should be covered on the under side with a specially prepared canvas paint. This should be composed of raw oil, zinc, oxide, carbon black and dryers. The canvas should be applied while the undercoating is wet and allowed to dry on the car. The outside of the roof is handled in the same manner. The roof should have at least three coats, allowing 24 hours between each coat. When the exterior of the car has been prepared for painting, and after the priming coat has been applied, it is followed up with three or more coats of surfacer, which is very finely ground in Japan or varnish. The car is then decorated, after which two or more coats of wearing or finishing varnish are applied. The theory of the best experts is, that you must keep each coat, from the priming to the finishing varnish, as elastic as possible, so as to ensure durability, because elasticity means durability. This is especially true in painting steel coaches, as the metal contracts and expands according to weather conditions. The trucks and underframing of a car should be thoroughly cleaned and free from rust and grease, before the priming coat, after which the underframing is painted to prevent deterioration, the trucks are given one coat of enamel and one coat of finishing varnish. This constitutes in a very rough way the regular treatment of the exterior of a coach.

The interior finishing of a car varies, as there are many different kinds of wood used and each is usually treated according to its own peculiar nature. For instance, a different method is followed for maple than for oak, but the general method applies to all, such as the staining, filling and varnishing, rubbing and polish-

ing. Some very interesting discussions can be had on the question of using a flat varnish for interior finish. Personally, I have had splendid results from the use of a varnish of this kind. Its wearing qualities are the same as high grade finishing varnishes and much time is saved by eliminating rubbing and polishing.

As the methods employed in car painting have changed considerably in the past 20 years, a comparison at that time with the present will no doubt prove interesting. Twenty years ago all passenger equipment was constructed of wood and the exterior painting was handled as follows: The 1st coat was known as the primer coat, which consumed four or five days in drying. This was composed of 75% white lead, 25% of pure raw linseed oil, and was prepared in paint shop. The 2nd coat was called oil lead coat, and dried in 24 hours, composed of 60% white lead, 15% raw linseed oil, 5% lamp black, 20% Japan dryers. The 3rd coat, known as flat lead coat, dried in 24 hours, and was composed of 75% white lead, 20% Japan dryer, 5% lamp black. We then glazed and puttied on this coat. Oil putty was used for nail holes only, and glaze used on sunken, uneven and bruised parts. This glaze was made from 75% white lead, 20% Japan dryers, 5% lamp black. This coat was then roughly sandpapered, after which followed four coats of rough stuff, applying two coats a day, the rough stuff was made from renofillers or mineral compositions mixed with oil, to give the best wearing qualities. Japan dryers were used for drying, and rubbing varnish was used as the fourth ingredient, which furnished a good rubbing surface. The next operation was known as the guide coat, made from 75% yellow ochre, 15% Japan dryers, 18% of benzine as a reducer. This coat dried in two hours. The next operation was the rubbing. This was done with black pumice stone and water, time allowed for rubbing from 12 to 18 hours, after which the car was sandpapered with very fine paper and allowed to dry for 24 hours. This constituted the preparing of the car for the color and varnish.

The 4th coat of color was ground in Japan and thinned with turpentine, with a small proportion of rubbing varnish, allowing 24 hours to dry. The 2nd coat was the same as the 1st coat. For the 3rd coat the color used was the same shade as used on the two first coats and mixed with rubbing varnish. For the 4th coat, the same color mixed with rubbing varnish, more varnish than color. This color and varnish body was then rubbed with pumice stone and water, thoroughly drenched off with clean water and wiped with a chamois. Car was then lettered and decorated and finished with one or two coats of wearing body varnish. This practice of painting kept a car in shops from 20 to 24 days. This gives a fair idea of the system practiced in previous years.

The practice, in vogue at present for exterior painting, both wood and steel, is about the same, except that a different mixture is used for the priming coat. The primer for wood should have more oil. The primer for steel should have more varnish. The following is the number of coats and time consumed in drying: First operation is known as the priming coat and dries in 48 hours. Second operation is known as surfacer or rough stuff and

dries in 24 hours. Third operation, same as second, except on the top of this coat, all nail holes are puttied with oil putty, all uneven parts and bruises are glazed with a glazing putty, allowing 24 hours to dry. Fourth operation: same method as the second, allowing 24 hours to dry. Fifth operation: The car is now ready for rubbing or sandpapering. It has been proven that as smooth a surface and much quicker results can now be obtained with sandpapering, instead of the old practice of rubbing with rubbing block and water, this is due to the use of more refined oils and quicker drying long oil varnishes and to the paint being ground much finer. Sixth operation: One coat of color, consisting of color ground in Japan, thinned with turpentine and a small proportion of varnish, allowing anywhere from 6 to 12 hours to dry. Seventh operation: same as sixth. Eighth operation, lettering and decorating. Ninth operation, a coat of railway body finishing varnish, allowing 48 hours to dry. This coat

fine sandpaper and then letter and decorate. Fifth operation: One coat of wearing body varnish, allowing 48 hours to dry. Sixth operation, same as fifth.

Cars finished this way must be shopped at shorter intervals than painted cars, and this is not due entirely to the cracking or perishing of the varnish. For instance, when a car is painted, all joints especially those around battens and sills are sealed with paint, which prevents water getting to the under side of sheathing, causing what is known as water-logged sheathing. With varnish alone this could not be accomplished, and when only putty is used it finally shrinks and falls out, allowing water and dampness to penetrate the sheathing. Cars finished in this manner, after having been in service 12 months, and sometimes less, have to be shopped again for varnishing. When the car has been thoroughly cleaned, it is often found necessary to remove sheathing, on account of having become water-logged, due to insufficient protec-

### Cars for Coal Transportation in Western Canada.

The Board of Railway Commissioners passed general order 176, Dec. 26, as follows:—Re car shortage in the west for coal transportation, and the complaint of the Cardiff and Drumheller collieries complaining of the refusal of the Canadian Northern and the Grand Trunk Pacific Railways to supply cars for loading coal destined to points on other lines of railway. Upon investigating the complaints and the coal situation generally in the west, and the reports of the Board's Chief Operating Officer, it is ordered that all companies subject to the board's jurisdiction be required and directed, according to their respective powers and to the full extent that cars are available for the purpose, to supply cars for the movement of coal as and when required, not only to points on the originating line of railway, but also to points on other lines of rail-



Bridge Pier at Port Nelson, Man.

This pier, consisting of a number of stone filled, cribwork piers and a series of steel spans, extends from the shore at the Hudson Bay Ry. terminus at Port Nelson to a handmade island, also of stone filled cribwork, which will be used as the loading and unloading berth for ocean steamships, as the water is not deep enough to allow them to approach nearer to shore. The photograph was taken in September, 1916. The above mentioned work was described as follows by D. W. McLachlan, Engineer in Charge, in a report to the Railways Department, May 6, 1915. "It has been found a most difficult matter to decide the design and form of the harbor works in the Nelson estuary, but after close observation and study it has been decided to build a cigar-shaped island near the natural channel of the estuary, and from this island to the end of the present works construct a bridge on piers, which, though unusually large, can be safely protected from ice action by the liberal use of riprap."

is the preserver for all paint underneath and should be of a good quality to insure durability. Tenth operation, second coat of railway body finishing varnish. This practice keeps car in shop from 16 to 18 days. Cars painted in this manner, after having been in service 12 to 15 months, are again shopped for varnishing. After the car has been thoroughly cleaned it is touched up, cut in with one coat of color, and is then given two coats of varnish.

In finishing of natural wood cars the operations are as follows: Before a sheathing is applied it is soaked in a vat of oil. First operation, one coat of paint, which is known as wood surface, composed of long oils and is very penetrating, allowing 48 hours to dry. Second operation: Sandpaper lightly, after which the car is dusted off and filled with a filler composed of siliceous whitening and oil and thinned with turpentine applied with a brush and wiped off with excelsior and waste, allowing 24 hours to dry. Third operation: One coat of wearing body varnish, allowing 48 hours to dry. Fourth operation: Sandpaper lightly with a very

tion from rain and dampness. When car is again ready for service it does not present a good appearance, due to contrast in color of old and new sheathing. From five to six years is about the average life of the exterior finish of a car finished in natural wood, while a painted car should run from six to nine years before the exterior finish has to be renewed. The expense of scraping and complete renewal of the exterior finish of a natural wood car is much greater than of a painted car.

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

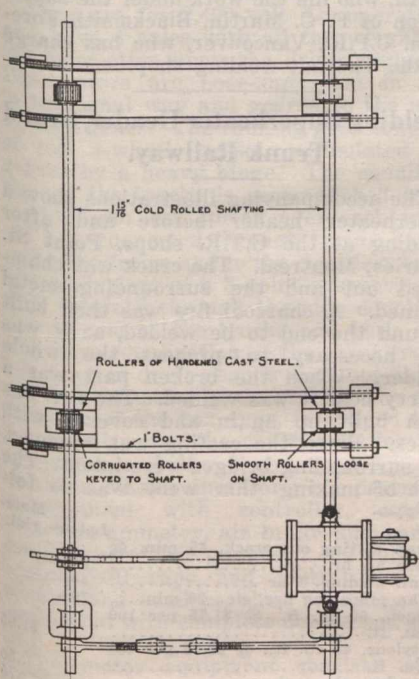
**Curtaiment of Railway Service in Great Britain.**—It was announced in the British Parliament recently that commencing with Jan., 1917, the railway service would be curtailed, and fares increased 50%, to enable rolling stock to be released for war purposes. The new regulations will not apply to workmen's tickets, nor to commutation tickets for distances not exceeding 40 miles.

way. For all movements requiring transportation over more than one line, the company that enjoys the longer portion of the haul shall supply the cars, and in case such company is unable to supply the cars, then the other company, although only obtaining earnings for the movement over the shorter portion of the haul involved, shall supply the cars; but in such case shall be entitled to be paid by the company enjoying the longer haul a per diem charge of \$1.25 for each and every car so supplied, instead of the usual per diem charge and any increases thereof that may be made less than the said sum of \$1.25, the said charge to run from the time such cars leave until they are returned to the owning company's line. And it is further ordered that railway companies without sufficient equipment forthwith make the necessary changes in flat or live stock cars in order to provide for the present emergency and to enable them the better to carry out the provisions of this order. This order to be effective from Oct. 1 to Mar. 31 in each year.

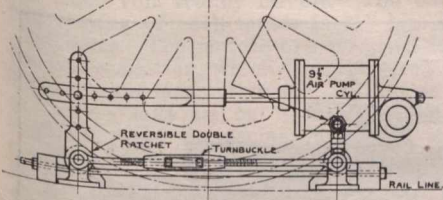
# Railway Mechanical Methods and Devices.

## Ratchet Valve Setting Machine, Canadian Pacific Railway.

After a locomotive has undergone general repairs there is necessity for the resetting and testing of the valves, for lap and lead, and so forth. This may be accomplished by coupling the locomotive to a live locomotive and noting the position of the points while the locomotive is being moved along the rails by the live locomotive. As this method is detrimental to the progress of any other work on locomotive which it may be desired to do at the same time, the advantages of the arrangement shown in the accom-



SPEED AND STROKE REGULATED BY THROTTLING THE EXHAUST BY VALVE.

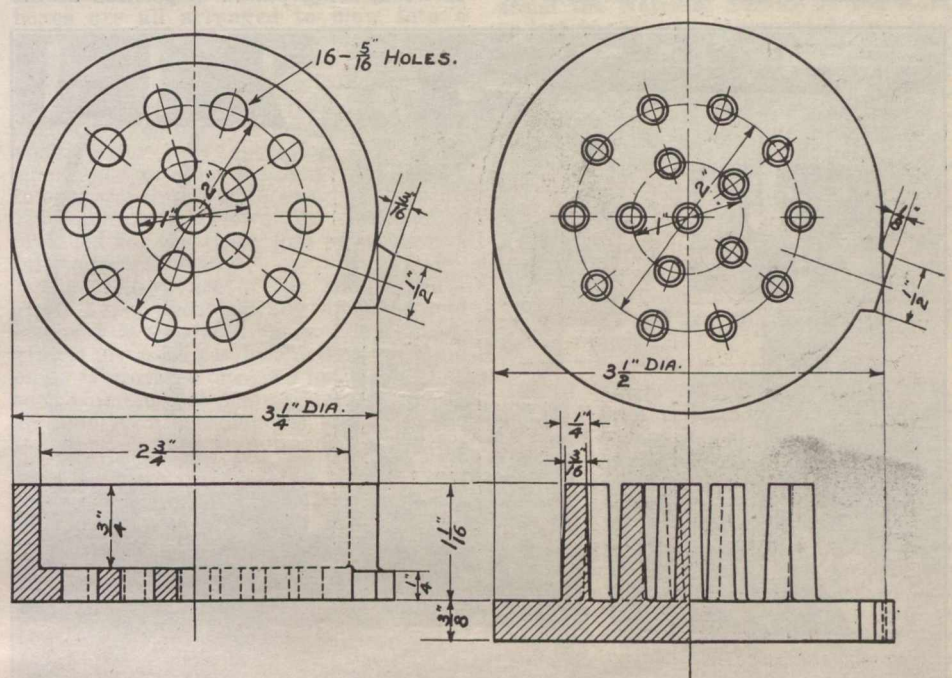


Ratchet Valve Setting Machine.

panying illustration will at once become apparent.

The shafts being placed across the rails, one on each side of the main driving wheel, the shoes (or bearing castings) and other attachments are then put in place as shown. The shafts are then drawn together by means of the four bolts and the turnbuckle, thus lifting the driving wheel a slight distance from the rails. The air pump is then connected to the ratchet. The machine has four rollers, two engaging the wheels on the ratchet shaft, the other two being idlers. The two engaging rollers are corrugated so that they bite on the wheel. These rollers are keyed to the shaft. The air pump drives the ratchet which revolves the shaft on which the keyed rollers are mounted, the speed of the air pump being regulated by the valve on exhaust pipe. By this method the drivers can be placed in any desired position, and as

valves are usually marked before being taken down they can be replaced and adjusted without disturbing any other portion of the work. We are indebted to W. J. Brown, Foreman, tool room, C.P.R., Ogden, Alta., for the foregoing information and the drawing.



Shim Gate for Foundry Use.

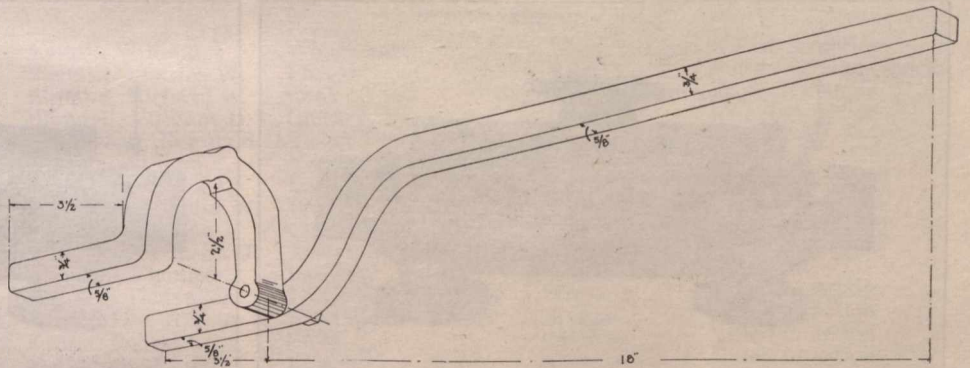
## Shim Gate for Foundry Use, Canadian Northern Railway.

In every foundry difficulty is experienced in preventing slag from getting into the casting, and very often castings

## Wrench for Uncoupling Steam Hose in Canadian Pacific Yards.

The dangerous practice of uncoupling steam hose on passenger cars with the hands is done away with by the use of a simple wrench, illustrated herewith, which is in use in the C.P.R. yards at Vancouver, B.C. The wrench is made of flat iron,  $1\frac{1}{4} \times \frac{1}{2}$  in. and is 25 in. long over all. In use, the coupler is gripped

are lost in consequence. The accompanying illustration shows the core box for a metal strainer which is used in the Winnipeg shops, Canadian Northern Ry. This mould forms a core  $\frac{3}{4}$  in. thick, which is perforated with sixteen  $\frac{5}{16}$  in. holes slightly tapered. The core is put into the sprue hole before the metal is poured and strains the metal, floating all slag to the top. Since this method has been used, not a casting has been lost in the shop through slag. The method is very sim-



Wrench for Uncoupling Steam Hose.

by the wrench, which is merely pressed on the coupler, thus forcing it apart. We are indebted to C. E. Gibbs, Foreman passenger car yard, Vancouver, for the foregoing information.

Notes on Heavy Electric Railway Traction.—The article on this subject, by J. A. Shaw, General Electrical Engineer, C.P.R., published in Canadian Railway and Marine World for January, was a reproduction of a paper read before the Canadian Railway Club in December. Owing to an oversight this fact was not mentioned.

ple, and a stock of core plugs can be kept on hand for different sizes of sprue holes. We are indebted for this information to L. Davidson, Foreman of Foundry, Winnipeg shops, C.N.R., who saw the device at a foundrymen's convention in the United States in 1915 and decided to try it. He says it is the best shim gate he knows of.

The C.P.R. Chateau Frontenac Hotel, Quebec, will be operated on the European plan from May 1. The minimum rates for rooms will be \$2 without bath, and \$3 with bath.

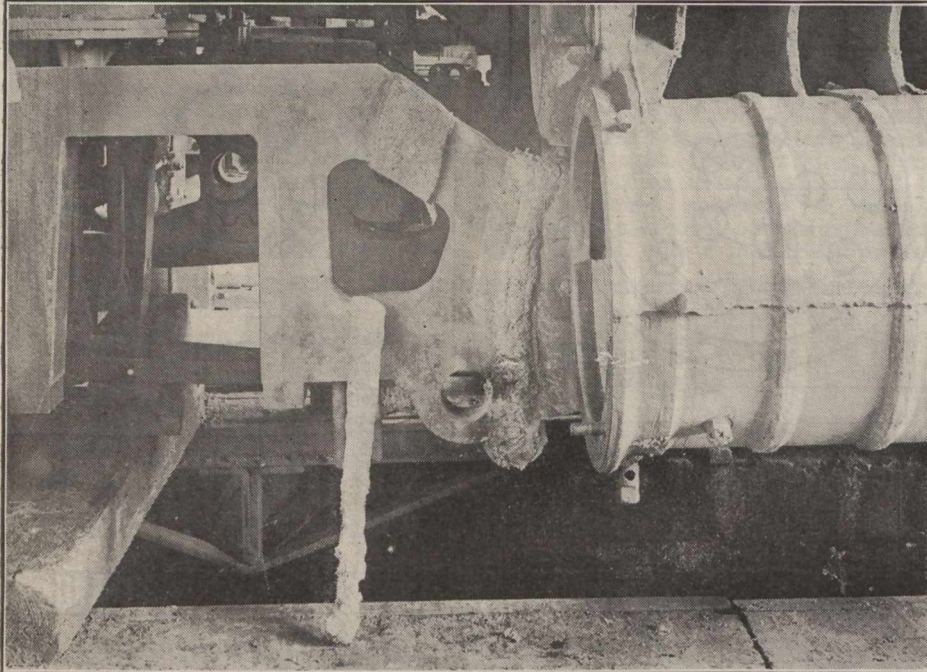
**Thermit Welding on Canadian Pacific Railway.**

The Thermit welding process applied to locomotive repair work has resulted in greatly lessening the cost of repairing broken frames, etc., and greatly reducing the time necessary to do the job, compared with the old method of welding in the blacksmith forge. The increasing weight of locomotives and the consequent in-

necessary, the amount of wax used being 9½ lb. The mould box was then placed in position, being 3 ft. 4 in. deep, 15 in. wide, and 3 ft. long, the length of the box being placed crosswise to the frame, the bottom of the box being about 5 in. below the frame. The moulding material, consisting of ground firebrick, fireclay, and moulding sand, was rammed in tightly, the pre-heating gate, pouring gate and riser patterns, which are made of wood, being placed in position as the

knocking upward a small plug at the bottom of the crucible. The molten steel, at a temperature of 5,000 deg. Fahrenheit, ran down the pouring gate and filled up the space formed by the wax, any excess metal coming up through the space left by the riser pattern. The jack used to expand the frame was removed 2½ hours later, to provide for contraction. The job was left at this stage until the following morning. The mould box was then removed and the weld was found to be a success in every respect. The steel left in the riser and pouring gate was cut off by the acetylene flame. The parts of the locomotive which had been removed were placed in position and the locomotive was again ready for service.

We are indebted to the foregoing information to H. Cattell, leading blacksmith, who did the work under the supervision of F. C. Martin, Blacksmith Foreman, C.P.R., Vancouver, who has charge of the Thermit welding shop.



Thermit Weld at Vancouver Shops, C.P.R.

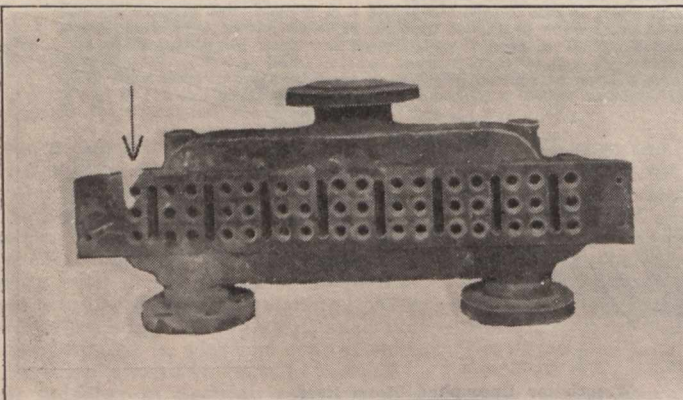
crease in the size of the framework has rendered it almost impossible to weld them by the old method. The value of Thermit in cases of this kind is exemplified by a weld recently made on C.P.R. locomotive 3826 in the Vancouver shops. The frame was broken 2½ in. from the cylinder casting, the fracture being 28 in. long, with an average thickness of 5½ in. First the parts adjacent to the fracture

work progressed. The wooden patterns were then carefully withdrawn. A stout piece of twine, previously embedded in the wax leading from the pre-heating gate to the riser was then withdrawn. The hole formed by the twine provides ventilation, which facilitates the melting of the wax. The crucible was then placed in position with a charge of 275 lb. of Thermit. The gasoline pre-heating torch

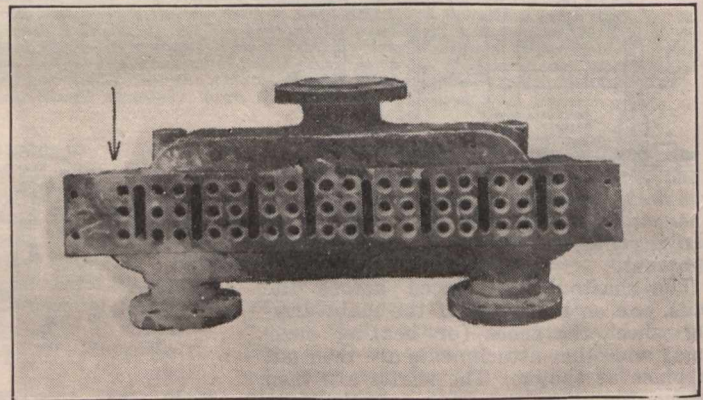
**Welding Superheater Header, Grand Trunk Railway.**

The accompanying illustrations show a superheater header before and after welding at the G.T.R. shops, Point St. Charles, Montreal. The crack was chamfered out and the surrounding metal cleaned. A charcoal fire was then built around the end to be welded, as it was not necessary to preheat the whole header. When the broken part was a cherry heat it was welded. The fire was then built up again and covered with ashes. When the casting was removed, the surrounding bridges were intact. The cost of making this weld was as follows:—

	Labor	Material
1 man cutting out crack, 45 min. @ 40c an hr. ....	30c	
1 man welding, 1 hr .....	40c	
1 man preparing fire, etc., 30 min. ....	20c	
Oxygen, 60 cu. ft., @ \$1.75 per 100 cu. ft. ....		\$1.05
Acetylene, 48 cu. ft., @ \$2.75 per 450 cu. ft. ....		.30
Iron, flux, charcoal .....		.75
	90c	\$2.10
		.90
<b>Total . . . . .</b>		<b>\$3.00</b>



Superheater Header, Before Welding



Superheater Header, After Welding

were removed and 1 in. holes were drilled through the frame in line with the fracture, leaving a space about 1 in. inside. The opening was then widened by means of a jack to allow for contraction. The frame was then well cleaned of all grease for a short distance each side of the fracture. Beeswax, softened in hot water to the consistency of glaziers' putty, was then pressed into the opening, filling it entirely, also around the outside to provide reinforcement to the extent thought

was then applied to the pre-heating gate, which took 6½ hours to melt out the wax and bring the frame to good red heat. A small quantity of ignition powder was then added to the Thermit charge and the pre-heating gate plugged with an iron core, backed up by a quantity of moulding material. A white hot poker was then applied to the ignition powder, which started the ebullition of the Thermit. This was allowed to continue for from 30 to 40 seconds, when the crucible was tapped by

We are indebted to W. D. Robb, Superintendent of Motive Power, G.T.R. for the above information and the photographs.

The Greater Winnipeg Water District put a new time schedule in operation on its railway Jan. 1. Eastbound trains leave the old Canadian Northern in St. Boniface Monday, Wednesday and Fridays at 8 a.m., instead of 7 a.m. and the westbound train leaves Waugh Tuesdays, Thursdays and Saturdays at 6 a.m.

## Electric Locomotives for Mount Royal Tunnel.

The Canadian Northern Ry. has received 3 electric locomotives of the 6 ordered for its electrified zone, extending from the terminal station in Montreal through the Mount Royal tunnel to Cartierville. Following are the general dimensions:—

Length inside knuckles . . . . .	37 ft. 4 in.
Length over cab . . . . .	31 ft. 0 in.
Overall height, pantograph down . .	15 ft. 6 in.
Height over cab . . . . .	12 ft. 10 in.
Overall width . . . . .	10 ft. 0 in.
Total wheel base . . . . .	26 ft. 0 in.
Rigid wheel base . . . . .	8 ft. 8 in.
Total weight, all on drivers . . . . .	83 tons
Wheel diameter . . . . .	46 in.
Tractive effort at 30% tractive coefficient . . . . .	49,800 lb.
Tractive effort at 30-hour rating . . .	20,300 lb.
Tractive effort at continuous rating . .	14,500 lb.

They are for 2,400 volt d.c. operation, and have 4 axles with all the weight of the locomotive upon the driving wheels. The motors are nose-supported in the usual way and geared to the axle by twin gears. The running gear consists of two 4-wheel trucks, articulated together by a heavy hinge. The equalization of the trucks is accomplished by a semi-elliptic leaf spring over each journal box, connected through spring hangers to the frame and to the equalizer bars. The equivalent of a 3-point suspension is thus obtained through the side equalization of one of the trucks and both side and cross equalization of the other truck. The friction draft gear is mounted in the end frame casting of the truck. The cab, which is of the box type, is divided into 3 compartments, the centre one for the operator. Each operator's compartment is supplied with controller, control switches, ammeter, air brake and pantograph control, air gauges, 2,400 volt cab heater, bell rope and control for the whistle and sanders, thus providing the locomotive with complete double end control.

The motor equipment consists of 4 CGE-229A commutating pole motors, wound for 1,200 volts and insulated for 2,400 volts, two of them being permanently connected in series for operating on the 2,400 volt trolley circuit. The one-hour rating of each motor is 315 h.p. at 1,200 volts. The motors are designed for forced ventilation, which is obtained by a blower in the locomotive cab. Either pair of motors may be cut out, in case of emergency, by a special handle on the change-over switch. The locomotives are geared for a free running speed on tangent level track of approximately 45 m.p.h., and are operated as 2 speed machines with 10 points in series and 9 points in series-parallel. The master controller used is of the non-automatic type and has two handles, one regulating the applied voltage at the motors and the other for controlling the direction of rotation of the motors. The rheostats which form the external motor resistance are placed near the roof of the cab and provided with ample natural ventilation. The master controller and contactor energizing circuits are designed for 125 volts. Each contactor is easily accessible without any disturbance to adjacent contactors. A special electro-pneumatic change-over switch is used for making the transition between series and series parallel connection of the pairs of motors. The 125 volt current for operating the contactors and for lighting the cab and headlights is obtained from a motor-generator set, the motor of which has two 1,200 volt windings and two 1,200 volt commutators

in series for operation on 2,400 volts. This set is mounted in the centre cab and also drives the blower for providing forced ventilation to the main motors.

Fuses of the copper ribbon type, placed in fuse boxes, provide protection for each individual circuit, as well as the main circuit from the trolley. These fuse boxes are all arranged to blow into a common chamber, designed to take care of the arc. In addition to the fuse on the main circuit, a main switch is also provided. This is of the knife blade type, being opened and closed by a handle placed in a position for easy operation in case of emergency, or when it might be necessary to open the circuit while carrying current. This main switch blows into the chamber provided for the fuses, and has a powerful magnetic blowout.

The trolleys are of the slider pantograph type, pneumatically operated and mounted on insulated bases. Two pantographs are used per locomotive. A hand pump is provided in case a locomotive has been standing for some time and has no air supply. A speedometer, similar to the largely used on automobiles, but especially designed for locomotives, is located in each operating cab. These are connected to the driving wheels of the locomotive by flexible shafts and gearing. A combined straight and automatic air brake equipment is provided on each locomotive, including a 2,400 volt motor driven air compressor, the set consisting of two 1,200 volt motors, operating in series on 2,400 volts and direct connected to an air compressor having a displacement of 100 cu. ft. of free air a minute. The approximate total weight of each locomotive is 83 tons. They are being supplied by Canadian General Electric Co., 2 of them having been built at that company's Peterborough, Ont., works and 4 at the General Electric Co.'s works, Erie, Pa., one having been delivered from the former place and two from the latter.

## Canadian Government Railway Employes and National Service.

Early in January the following circular was addressed to all C.G.R. officers and employes, with the approval of the Minister of Railways:—"To assist the National Service, first, in taking an inventory of the man-power of the nation by having the cards which are being distributed properly filled in; and, second, to assist the National Service in the work undertaken, the management desires that all officers and employes within the age limits referred to on the card fill in their answers promptly and correctly and return same to the Director General of National Service, Ottawa.

"With reference to questions 23 and 24, the management will undertake to give leave of absence in cases where such is desirable, and will undertake through the Provident Fund Board to protect the standing of such officers and employes as 'employes' within the meaning of the Provident Fund Act during the leave of absence period."

E. J. Chamberlin, President, G.T.R. and G.T.P.R., telegraphed the following message to every station on the system Dec. 31:—"In thanking all officers and employes of the company on behalf of myself and the board of directors for their loyal and efficient service during the year just closing, I desire to extend to each and every one my best wishes for the health and happiness of themselves and families during the ensuing year, and to solicit the co-operation of every employe in making the G.T.R. and its service to the public during 1917 superior to any railway on the continent."

Travellers Shop on Trains.—The Canadian Northern Ry. has established on its trains between Toronto and the Pacific Coast, a travellers' shop, in charge of the observation car porter, the stock containing a wide range of articles, from shoe laces and collar buttons to smelling salts and bon-bons.

## The Canadian Pacific Railway's Honor Roll No. 16.

Averill, William	Wheel borer	West Toronto	Killed in action
Bennett, Charles W.	Porter	Regina	Suffering from shock
Bigland, Richard K.	Cook	Montreal	Died of wounds
Blundell, William D.	Clerk	Montreal	Killed in action
Brightman, Reginald G.	Ticket Clerk	Fort William	Wounded
Bryson, William	Machinist's apprentice	Angus	Wounded
Copeland, Thomas	Locomotive fireman	Revelstoke	Wounded
Crowther, Othello W.	Pipe fitter's helper	Winnipeg	Wounded
Dickson, William	Cleaner	Winnipeg	Killed in action
Ellis, James G. St. J.	Assistant Engineer	Kentville	Killed in action
Fletcher, Thomas	Painter	Fort William	Wounded
Gordon, Alexander	Locomotive fireman	Victoria	Killed in action
Haselgrove, Arthur W.	Electrician's helper	Angus	Killed in action
Kenna, Robert	Clerk	Montreal	Killed in action
McCallum, Rupert	Laborer	Outremont	Killed in action
McDonald, Malcolm	Waiter	s.s. Kootenay	Wounded
Mawdsley, Herbert	Shed foreman	Kamloops	Killed in action
Nase, William B.	Locomotive engineer	Fort William	Wounded
Naylor, James	Car repairer	Assiniboia	Suffering from shock
Ratcliffe, Frank J.	Machinist's apprentice	Angus	Concussion
Sawkins, Ernest H.	Wiper	Kneora	Wounded
Sinclair, Daniel G.	Car inspector	Sortin	Killed in action
Speirs, Alexander	Brakeman	Winnipeg	Suffering from shock
Spence, William T.	Locomotive fireman	London, Ont.	Killed in action
Staples, Frederick W.	Steward	s.s. Princess Charlotte	Wounded
Stirling, John B.	Carpenter	Medicine Hat	Suffering from shock
Tait, Mortimer	Clerk	Victoria	Wounded
Wark, Arthur Goodwin	Brakeman	Kenora	Wounded
Wilkinson, Jesse	Painter and varnisher	Angus	Wounded
Wills, Sydney Charles	Car cleaner	Glen Yard	Wounded
Wright, Harry	Waiter	Montreal	Wounded

## Reduction of Passenger Train Service to Relieve Freight Congestion.

The following judgment was given Jan. 8, by the Chief Railway Commissioner, Sir Henry Drayton, and concurred in by the Assistant Chief Commissioner, D'Arcy Scott, and Commissioners McLean and Goodeve: The matter of traffic congestion has been anxiously considered for some time past. In so far as the fact of congestion is concerned, there is no room for doubt. Coal and coke shipments have been delayed to a serious and in some instances, to an alarming extent; the proper supply of raw materials to munition factories has been interrupted, and the movement of grain from the northwest, which is much required not only by the grain producing territory in the west but as well by the consuming eastern centres, to say nothing at all of the overseas demands which must be met, has been interfered with. The grain movement from the west has been limited to some extent by the movement into and out of the eastern territory and storage facilities therein, and has also in no small measure been injuriously affected by a shortage of box cars and by a shortage of men, and to a lesser extent of locomotive power.

The causes of congestion are not altogether a railway failure, but include an irregular loading movement overseas, resulting in an uncertainty in the railway movement and consequent congestion of traffic of itself in excess of the traffic ordinarily offered on Canadian lines. Over and above all this, the situation is rendered the more acute by reason of the fact that, owing to the financial and traffic conditions obtaining in 1914, and for a portion of 1915, the railway companies had not ordered equipment, which has now become necessary, and later were unable to get it, speaking generally, except at largely increased prices on deliveries at an early date. Again, over and above all this, the congestion became more marked, in the first instance, on the lines in United States territory, with the result that traffic which otherwise would have been routed on U. S. lines was routed via Canadian lines and offered in large quantities before protective embargoes went into force. The result is a traffic congestion at all points at the border, both on the Canadian and U. S. sides, and at a large number of the divisional points and at all large terminals.

The imperative duty of the Board is to see, in the first instance, that this country fails in no regard in supplying materials necessary in the prosecution of the war. This, of course, means that the transportation required by the Imperial Munitions Board, from the different factories producing munitions or materials required by the Empire and its allies, must be properly and efficiently supplied. It also means that the full movement of grain and flour required both by Great Britain and by the allied nations be fully and completely maintained. In like manner, it is the duty of the Board to see that the freight movement of the necessities of life for our own people, and raw material required for our export trade, on which depends so much in the matter of exchange and the financial standing of the country, is now allowed to suffer. The Board has done everything possible to expedite the movement of these commodities, with the equipment and competent men now available for freight service. No more can at the moment be done in this direction, the railways are using every man available and every locomotive fit to use owned by the

companies or which they have been able to rent for this purpose.

The question now that the Board has to decide is as to whether the movement already referred to as being so necessary should continue to suffer, or whether, on the other hand, locomotives and men now used in passenger business ought to be released and put into freight service. In my opinion, there is no room for doubt as to what ought to be done. Convenience and comfort on the one hand must be sacrificed to necessity on the other. The companies have been advised that the freight movement must be increased and the passenger movement curtailed to the full extent that that movement can be curtailed and the necessary communication between different districts maintained. Circulars 138 and 139 issued by the Board, requiring 10 days notice to the Board and to the public of changes in passenger service will be suspended until further order. It is necessary that this should be done, in view of the direction to the railway companies to forthwith cut off all unnecessary passenger movement and to increase the facilities of the freight service.

It is quite true that not all of the passenger locomotives can be effectively used in freight service, but many of them can, however; and, apart from the question of locomotives, the crews will become available, and the supply of railway men, competent and efficient, directly increased in the proportion that the passenger service is reduced. Over and above all this, in the public interest, in view of the coal shortage existing, the large quantity of coal consumed in passenger service ought to be curtailed as much as possible. More effective service can be given in the companies' mechanical and locomotive shops, and the freight equipment be better maintained and made more efficient than it is today, with a reduced passenger service. There will also be more room in the yards and a more free and expeditious movement of freight trains will become possible.

In my view, the Board cannot well at the present moment order the companies to remove any specific trains. The details of the different passenger movements are much more familiar to the companies than they are to the Board, and in the reductions that must be made the companies will have to see that every section of the country at least has the necessary passenger movement both in and out, although this may mean the carrying on of some trains not of themselves remunerative and the cancellation of trains which may be remunerative to the companies. The chief congestion is to be found at the frontier and on the section between Hamilton and Toronto. Three companies are directly interested in the passenger movement there—the Grand Trunk, Canadian Pacific, and Toronto, Hamilton & Buffalo Railways. The territory is one requiring, undoubtedly, a good passenger service. Probably each and every company will be able to show that every train operated in this district is operated at a profit. It is, however, absolutely necessary that at this, the most congested point, the companies must lose their passenger revenue and the public be inconvenienced, until the present emergency is past. There are now 40 trains operated daily over the territory, that is, 20 into and 20 out of Toronto. In view of these circumstances, a radical cut in this service must immediately go into

effect. This district must be supplied with coal and raw material, not only owing to its own necessities, but also owing to the fact that in it are situated a large number of munition factories now in danger of being closed. In my view, direction ought to be given immediately that out of these 40 trains, 16 must be cancelled, the companies to select out of the total those trains which can be cancelled with the least possible public inconvenience. The mere factor of company revenue cannot be made a controlling factor. After a careful review of the situation, I am further of the opinion that the Canadian Pacific ought to and can rearrange its service so that a saving can be made of some 26 locomotives and crews, the Grand Trunk 35, and the Canadian Northern 12.

The reductions which are now proposed in the passenger service, entailing as they do a considerable loss of passenger revenue, in some cases, to the companies, and inconvenience to the general public, are merely tentative. As and when the congestion from which the country is now suffering, and which probably will continue to a greater or less degree until the opening of navigation, is removed, the service must be restored. All companies must use all suitable equipment and men released from the passenger service for the transportation of freight.

Particulars of the reductions and changes in passenger train service which have been made in consequence of the foregoing judgment are given on a later page of this issue.

**Track Elevation at Spokane, Wash.,** by the Northern Pacific Ry. will extend for 2 miles through the city. The tracks will be raised 12 to 16 ft., and carried on solid fill between concrete retaining walls, with about 20 bridges over the streets. The passenger station is involved in the change. There are 12 to 15 tracks at some parts of the line, and the width of the roadbed will be from 85 to 225 ft. The work will be done without interrupting traffic, which amounts to about 40 regular trains daily. The plan is to build the north wall and then a trestle along the north side from which a fill will be made wide enough for two main tracks. Traffic will then be diverted to these tracks, and the filling continued to the south wall.

**American Railway Engineering Association.**—The following have been nominated for officers for the ensuing year: J. G. Sullivan, Chief Engineer, Western Lines, C.P.R. for President; Earl Stimson, Engineer, Maintenance of Way, Baltimore & Ohio Rd., for Vice President; G. H. Bremner for Treasurer; and E. H. Fritch for Secretary. Ten members have been named for the nominating committee, from which five are to be selected. Among them is J. R. W. Ambrose, Chief Engineer, Toronto Terminals Ry. Co. The elections take place in March.

**Reduced Railway Service in Great Britain.**—With the New Year some 400 passenger trains disappeared from the British railway time tables. Many of the remaining trains run more slowly and with a larger number of stops. Long distance non-stop expresses are now as rare as they were 30 years ago. The London Daily News says that, so far, as comfort and speed are concerned, the clock has been put back a quarter of a century. Fares have been advanced 50%.



## W. F. Tye on Canada's Railway Problem and Its Solution.

W. F. Tye, M.Can.Soc.C.E., consulting engineer, Montreal, formerly Chief Engineer, C.P.R., read a paper on the above mentioned subject before the Canadian Society of Civil Engineers in Montreal, Jan. 17. He dealt exhaustively with the location, cost of construction and results of operation of the Canadian Pacific, Grand Trunk, Intercolonial, Canadian Northern, National Transcontinental and Grand Trunk Pacific, and gave the following as his conclusions and as recommendations:

The National Transcontinental, the Grand Trunk Pacific and the Canadian Northern railways are unable to earn their operating expenses and their fixed charges. Canada has built, and is operating, the first of these roads, and Canada and the various provinces have guaranteed the principal and interest of most of the bonds of the other two. As the roads are unable to earn their fixed charges, these must, of necessity, be paid by the country. The failure of these roads is due to the duplication of lines by all the railways, encouraged and bonussed by the government; to the excessive cost of the Grand Trunk Pacific and National Transcontinental Railways; to the failure of the Grand Trunk Pacific to provide itself with an adequate system of feeders in the west, and to the construction, by the Canadian Northern, of the long and unproductive stretches of road across British Columbia and Northern Ontario, without feeders, terminals, etc.

If the Canadian Northern, the Grand Trunk Pacific and National Transcontinental be maintained in two separate systems, it will cost at least \$400,000,000 to build the necessary branch line feeders and terminals, to provide them with adequate rolling stock, and put them in proper physical condition to compete with the Canadian Pacific. It will be necessary that the Grand Trunk Pacific build 5,000 to 6,000 miles of feeders in the west. It will be necessary that the Canadian Northern build 2,000 to 3,000 miles of feeders in the east, and terminals, costing many millions, in Montreal, Toronto, Ottawa, Quebec and Vancouver.

Canada has already sufficient railway mileage for years to come. The additional mileage necessary for these roads could only be had by duplicating existing lines. Such duplication of lines would only add to the burden to be borne by Canada in the way of subsidies, guarantees, etc., without doing the country any good. Canada has sufficient railway mileage and traffic for two good transcontinental systems, the Canadian Pacific and another, but not enough for three.

A consolidation of the Grand Trunk, the Grand Trunk Pacific, National Transcontinental and Canadian Northern Railways would give a well balanced system. The Grand Trunk has an excellent system in the east, with terminals in all large and important centres; the Canadian Northern has not. Each is strong where the other is weak. Combining them must, of necessity, be the most economical and efficient way of handling the situation. Such a combination would not require more than \$100,000,000 to provide it with sufficient rolling stock, and to put it in proper physical condition to compete with the Canadian Pacific. The saving in capital cost would be at least \$300,000,000 and, at present rates of interest, the saving in fixed charges at least \$15,000,000

a year.

The National Transcontinental cost \$100,000 a mile to build. The parallel Canadian Northern cost less than \$50,000 a mile, and is, in every way, as efficient an instrument of transportation. The Quebec Bridge, with approaches, will cost \$40,000,000, and will not be necessary for many long years to come. The National Transcontinental, including the Quebec Bridge, has cost Canada at least \$100,000,000 more to build than it would have cost the Canadian Pacific to build as efficient a road.

Including operating expenses and fixed charges, it costs the Canadian Pacific about \$70 to do \$100 worth of business. Including operating expenses and interest on cost, it costs the Intercolonial and the other Canadian Government roads from \$200 to \$220 to do \$100 worth of business.

Canada should follow the wise example set by Sir John Macdonald, when dealing with the Canadian Pacific in 1879-80, and form a new private corporation, with sufficient power and the necessary safeguards, to take over and consolidate the Grand Trunk, Grand Trunk Pacific, National Transcontinental and Canadian Northern Railways, and develop another Canadian Pacific, rather than to have the Government take them over and develop another and a vaster and more expensive Intercolonial. Conditions for the formation of such a company are much more favorable than they were in 1880, as Western Canada had not then been proved, as it since has been, to be capable of supporting a large and prosperous population. Such a combination would start with gross earnings of at least \$100,000,000 a year, with a probable average increase of 8% a year, and probable net earnings of from \$25,000,000 to \$30,000,000 a year, and a net revenue from other sources of about \$2,800,000. Its fixed charges at consolidation would be about \$35,000,000, and it would be under the necessity of spending in the first five to seven years at least \$100,000,000 to provide rolling stock and to put its properties in good physical condition. Deficits for some time to come would be inevitable owing to the heavy fixed charges, amounting to about \$35,000,000, as compared with \$10,300,000 a year for the Canadian Pacific. As these high fixed charges are caused by the excessive cost of government construction, and by duplication of lines, bonussed and guaranteed by the government, Canada must pay them. The fixed charges would be at least \$15,000,000 less with one private system than with two, and very much less with private than with government management. With such a combination as has been outlined the series of deficits should not last more than five to ten years, after which the road should be very successful.

In order to control its policy and to share in its certain prosperity, Canada should have an interest in the new company. The Dominion Government should furnish 40% of the money required, own 40% of the stock, and appoint 40% of the directorate, but take no part in the actual management. This would give all the advantage of government control without any of the manifest disadvantages of government management. Once this combination was successful, Canada should once and for all abandon the vic-

ious policy of bonussing railway construction, either by gifts of money or land, or by the still more vicious policy of guaranteeing the bonds of railway companies of which it has no direct control.

### Passenger Rate Meetings at Quebec.

The usual January passenger association meetings were held this year at Quebec, on Jan. 9, 10, and 11. The usual routine business was transacted by the Niagara Frontier Summer Rate Committee and the Great Lakes and St. Lawrence River Rate Committee, the rate clerks meeting first and preparing schedules for submission to the committee meetings. G. C. Wells, Assistant to Passenger Traffic Manager, C.P.R., was elected chairman, Niagara Falls Summer Rate Committee; and J. F. Condon, G.P.A., Great Lakes Transit Co., Buffalo, N.Y. was elected chairman, Great Lakes and St. Lawrence River Rate Committee; James Morrison, A.G.P.A., Canadian Northern Ry., Montreal, being permanent secretary of both committees. G. C. Howard, A.G. P.A., New York Central Rd., retiring President, Niagara Frontier Summer Rate Committee, was presented with a gavel, the wood in which was taken from a hat rack used at one time by Commodore Vanderbilt in his private office in the old Grand Central Station, New York.

The International Water Lines Passenger Association dealt with the following subjects, which had been referred by the American Association of Passenger Traffic Officers: Telegraphic code applicable for use in passenger traffic department; association ticket paper; revised interline ticket; printing of folders and economical distribution of same; economy in operation of city ticket offices; definition of division terms; practical maps in Official Guide, and folders clearly distinguishing the line or system from its connections. Most of the lines on the Great Lakes gave notice of raising their rates from 10 to 15%, but the Canada Steamship Lines, Ltd., announced that it would not advance rates on the St. Lawrence-Saguenay route. The following officers were elected: President, E. W. Holton, G.P.A., Northern Navigation Co., Sarnia, Ont.; Vice President, M. J. Powers, G.P.A., Champlain Transportation Co., Albany, N.Y.; Secretary-Treasurer, M. R. Nelson, Northern Steamship Co., Buffalo, N.Y. The retiring President, F. B. Hibbard, G.P.A., Hudson River Day Line, New York, was presented with a gavel, the wood in which was taken from the wreck of the schooner Royal Savage, Benedict Arnold's flag ship, which was sunk at the south end of Valcour Island, Lake Champlain, Oct. 11, 1776.

The Quebec Ry., Light & Power Co. gave the officials attending the meeting a trip to St. Anne de Beaupre and a luncheon at the Kent House, Montmorency Falls. The next meetings of the three associations will be held at Buffalo, N.Y., in January, 1918.

**Railway Lands Patented.**—Letters patent were issued during Dec., 1916, respecting Dominion railway lands in Manitoba, Saskatchewan, Alberta and British Columbia, as follows:

	Acres.
Alberta & Great Waterways Ry . . . . .	5.85
Calgary & Edmonton Ry . . . . .	1,428.00
Canadian Northern Ry . . . . .	3,338.58
Canadian Pacific Ry . . . . .	3.80
Grand Trunk Pacific Ry . . . . .	7.74
Grand Trunk Pacific Branch Lines Co. . .	36.37
Manitoba & South Eastern Ry . . . . .	614.93
Qu'Appelle, Long Lake & Saskatchewan Rd. & Steamboat Co. . . . .	1,731.22
Winnipeg River Ry . . . . .	46.47
Total . . . . .	7,212.96

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

**Alberta & Great Waterways Ry.**—Tracklaying on the extension to McMurray was reported to be in progress during January, only 45 miles having been laid out of the 125.5 which it was hoped to have laid by the end of 1916. J. D. McArthur, President, is reported to have stated that unless some unforeseen obstacle occurred rails will be laid to Fort McMurray by Mar. 31. Ballasting of the newly laid mileage will be fully completed this year, and the station and other buildings will be erected.

We are officially advised that the company's Egg Lake branch starts at Dewar, mileage 101.4, and runs southeasterly to the provincial boundary, about 80 miles. A preliminary survey has been made for the entire distance and a location survey has been completed to mileage 50. Up to the end of 1916 grading had been completed for 11 miles and track had been laid thereon. (Jan., pg. 19.)

**Athabasca Valley Ry.**—The Alberta Legislature is being asked to extend the time for the building of this projected railway from near Independence, on the Edmonton, Dunvegan & British Columbia Ry., to Fort Assiniboine, Alta. J. D. McArthur, President, E.D. & B.C.R. and its associated lines, the Alberta & Great Waterways Ry. and the Central Canada Ry., is primarily interested. (Oct., 1914, pg. 468.)

**Brule Lake Ry.**—The Alberta Legislature is being asked to extend the time for the building of this projected railway from mileage 994 on the G. T. Pacific Ry., near the east shore of Brule Lake, southeasterly through Secs. 26 and 24, Tp. 49, Range 27, west of 5th Meridian, thence north easterly through Secs. 19, 20 and 29, Tp. 49, Range 26, west of 5th Meridian. (May, 1915, pg. 170.)

**Calgary & Fernie Ry.**—The Dominion Parliament is being asked to extend the time for the building of this projected railway between Calgary, Alta., and Fernie, B.C. Hough, Campbell & Ferguson, Winnipeg, are solicitors for applicants. (May, 1915, pg. 170.)

**Canadian Pacific Ry.**—The gap between Altawan, the western end of track on the Weyburn-Lethbridge line, and Manyberries, the eastern end of track from Sterling, Alta., is a little over 20 miles. It is expected that construction will be gone on with this year so as to have the line completed through.

A press report states that the yards at Raymond, Alta., are to be enlarged, and that work will be started early in the spring.

In our last issue it was stated that a contract for the extension of Pier D, at the foot of Grenville St., Vancouver, had been let to S. E. Jenkins & Co. The firm is Sydney E. Junkins & Co. A contract is reported to have been let to Vancouver Creosoting Co. for the piles required for the extension of this pier. The estimated cost of the piles required is put at \$150,000. A large number of them will be 130 ft. long. (Jan., pg. 25.)

**Canadian Western Ry.**—The Dominion Parliament is being asked to extend the time for the building of this projected railway from the International Boundary through Pincher Creek and Cowley and along the Old Man River to Livingstone Mountain, and thence to Calgary, Alta., with a branch to Michel, B.C. Hough, Campbell & Ferguson, Winnipeg, are solicitors for applicants. (May, 1915, pg. 170.)

**Caribou, Barkerville & Willow River Ry.**—The Dominion Parliament is being asked to extend the time for building this projected railway from near Eagle Lake, on the G. T. Pacific Ry., and along the watershed of the Willow River to the Cariboo Road at Barkerville, B.C.; a line from Barkerville to the junction of the Clearwater and North Thompson Rivers; and from 17 miles from the northerly terminus easterly to Bear River, 20 miles, and to increase its capital stock from \$1,000,000 to \$10,000,000. Pringle & Guthrie, Ottawa, are solicitors for applicants.

In Apr., 1915, the Minister of Railways approved of route map of the railway from Barkerville towards Willow River, 170 miles. (May, 1915, pg. 170.)

**Central Canada Saskatchewan Ry.**—The Saskatchewan Legislature is being asked to incorporate a company with this title to build a railway from Tps. 61, 62 or 63 on the western boundary of the Province easterly to Tp. 61 or 62, Range 8 or 9, w. 3rd meridian, thence southerly and easterly to Prince Albert. Anderson, Bagshaw, McNiven & Fraser, Regina, Sask., are solicitors for applicants. (See General Canada Ry., Feb., 1915, pg. 106.)

**Central Canada Ry.**—The Alberta Legislature is being asked to authorize the company to build the following additional lines: An extension of the line authorized by chap. 46, 1913, from Tp. 81, Range 4, west of 6th Meridian, westerly to the western boundary of the Province; to extend the same line northerly to the northern boundary of the Province, approximately parallel with Hay River; a branch line from Tp. 74, Range 17, west of 5th Meridian, near High Prairie, southerly to Snipe Lake, thence westerly to 6th Meridian; and a line from near Edmonton to Calgary. The line authorized to be built in 1913 was to start from Tp. 74 or 75, Range 18 or 19, west of 5th Meridian, to Peace River Landing, thence to Tp. 86, Range 4, west of 6th Meridian, with a branch from Peace River Landing northerly to the Brule River, near Tp. 94, Range 22, west of 5th Meridian. (May, 1916, pg. 106.)

**Edmonton & Southwestern Ry.**—An Edmonton, Alta., press report states that a contract has been let for making the preliminary location surveys for this railway and that the work will be started forthwith. The railway is projected in connection with a power development proposition at Blue Rapids, on the Saskatchewan River. The railway will have an approximate length of 70 miles along the power line. (May, 1916, pg. 183.)

**Edmonton, Dunvegan & British Columbia Ry.**—J. D. McArthur, President, is reported to have stated recently that during this year the work to be done will include the completion of the ballasting of the last 17 miles of the main line to Spirit River; the completion of the ballasting on the Grand Prairie Branch, and the completion of the line from Spirit River to Pouce Coupe. The rails for this extension have been purchased in the U.S., and will be laid as early in the spring as weather conditions warrant. This line will be ballasted and put in operation early in the autumn.

Tenders are under consideration for the erection of a steel bridge across the Peace River. It will have a total length of 1,600 ft., and will be 80 ft. above high water mark. The substructure will consist of 5 piers in deep water, 4 in shallow water, with concrete approaches, which

will require about 10,000 cu. yds. of concrete. The superstructure will consist of 7 200 ft. deck truss spans and 1 225 ft. through span, with girder approaches on either side. As soon as the bridge is completed, construction will probably be started on the extension of the line towards the Waterhole district.

A survey is reported to have been made for a line from Busby, mileage 34.7 from Edmonton, on the E.D. & B.C.R., to Fort Assiniboine, about 70 miles. (Jan., pg. 19.)

**Essex Terminal Ry.**—The Dominion Parliament is being asked to authorize the building of a branch line from the existing line near Ojibway to Pelton, Ont., seven miles. J. H. Coburn, Walkerville, Ont., is Secretary. (Jan., pg. 19.)

**The Grand Trunk Ry.**, on Jan. 10, took out a permit for the reconstruction of its freight sheds at the Ferguson Ave. yards, Hamilton, Ont., which were practically destroyed by fire, Jan. 7. The work is estimated to cost \$30,000. The property destroyed included the greater part of the freight sheds, the freight offices on Barton St., a number of empty and loaded box cars, together with a large quantity of package freight, the total loss being estimated at approximately \$100,000. (Jan., pg. 19.)

**The Grand Trunk Pacific Ry. Co.** is asking the Dominion Parliament to extend the time within which it may build branch lines generally. This covers branch lines mentioned in chap. 99 of the statutes of 1906; an additional line authorized by chap. 86 of the statutes of 1909; nine further branch lines authorized by chap. 103 of the statutes of 1910, and 12 additional lines authorized by chap. 83 of the statutes of 1911.

A second application asks the Dominion Parliament to extend the time for the completion of the following branch lines: From Tp. 22, Range 6, west of 2nd Meridian, to Yorkton and on to Hudson Bay, in the vicinity of Fort Churchill; from between longitude 105 and 107 to Prince Albert, Sask.; from between the east limit of Range 11 and the west limit of Range 16, west of 3rd Meridian, southwesterly and westerly to the vicinity of Calgary, or to a point on another line authorized to be built to Calgary; from a point on the last mentioned line between Range 20 and the west limit of Range 28, west of 3rd Meridian, easterly and southeasterly to Moose Jaw, Sask.; from Tps. 41, 42 or 43 on the line from Oban to Battleford, Sask., northwesterly and northerly to the main line between Arland and Wainwright, Sask. The first of these lines has been built and is in operation from Melville through Yorkton to Canora, 56 miles; the second is in operation from Young to St. Louis, 89 miles, and the grading is completed and ready for track laying into Prince Albert, 24.26 miles; the third is in operation from Biggar to Loverna, 105 miles; no work has been done on the fourth, while on the fifth a train service is being operated from Oban through Battleford to Carruthers, 104 miles. (Nov., 1916, pg. 447.)

**Great Northern Ry.**—Considerable progress has been made with the long cut from the Burnaby border through the North Road to the G.N.R. tracks on Brunette Creek. The cutting is about 1,400 ft. long, and averages 50 ft. in depth, and will be wide enough to permit of the laying of a double track to conform with the rest of the line into Vancouver. Two 16

car trains are run daily between the cutting to the False Creek terminals, where the material taken out is used for filling. The cut is expected to be completed in April, when a concrete and steel bridge will be erected across the North Road. The contractors are A. Guthrie & Co., Vancouver.

The Vancouver City Council has issued a permit for the erection of the proposed freight sheds on the False Creek terminal site, the work to be carried out by Grant Smith & MacDonnell, under the supervision of F. L. Townley, the company's architect. (Jan., pg. 19.)

**Grenville, Harrington & Northern Ry.**—The Quebec Legislature has incorporated a company with this title to build a railway from Grenville along the valley of the Rouge River, to Harrington East, thence northerly in Argenteuil County. (Jan., pg. 19.)

**Kenora & English River Ry.**—The Dominion Parliament is being asked to incorporate a company with this title to build a line from the National Transcontinental Ry. west of Superior Jct., Kenora District, Ont., northerly and westerly, crossing the English River west of Lac Seul, northerly and westerly through Patricia District and westerly and southerly to Winnipeg. Denton, Grover & Field, Toronto, are solicitors for applicants.

**Lynn Creek, B.C.**—The North Vancouver, B.C., City Council has before it questions concerning development along Lynn Creek Valley from which it draws its water supply. M. P. Cotton claims to have the right to remove timber from the valley, and desires to build a logging railway along the shore of the creek to enable him to get out the logs and to aid in the development of a zinc mine. North Vancouver is interested in the conservation of its water supply, and Mr. Cotton in the development of his property. The matter is still under discussion.

**Pacific Great Eastern Ry.**—The British Columbia Government on Jan. 8 authorized the issue of a treasury note for \$500,000 to carry on construction work on the line. This will, it is estimated, pay for material used and the actual cost of labor employed until the end of March. The work to be done under this order in council will consist of the continuance of track laying from Clinton towards Prince George and the finishing up of the grading between those two points. This work will be done entirely under the supervision of the government engineers.

Since the new B.C. Government took office the company appears to have been given very considerable attention. An order in council was passed, Jan. 8, authorizing the employment of accountants to make an audit of the company's books as the basis of a thorough consideration of the whole situation of the province's relationship to the company. It is expected that the Premier will make a statement as to the future of the company soon after the Legislature meets in February. (Jan., pg. 20.)

**Prince Edward Island Car Ferry.**—We are officially advised that the car ferry terminal pier, etc., at Port Borden, P.E.I., is not yet fully completed. The railway track connection with the P.E.I.R. has been completed, the track having been laid from the yard, where it had been laid in 1914, for a further distance of a mile on to the pier. (Dec., 1916, pg. 484.)

**Quebec Bridge.**—It was reported, Jan. 15, that such progress has been made with the manufacture of the steel for the suspension member of the Quebec Bridge,

that the contractors expect to have it ready for placing in position in September. The member is being built on the same plan as was the span which collapsed in Sept., 1916, and it will be floated into position on practically the same lines as that span was. (Nov., 1916, pg. 446.)

**The Roberval - Saguenay Ry.**'s main line runs from Ha Ha Jct., on the Quebec & Lake St. John Ry., to Bagotville, 20 miles, with a branch from Laterriere Jct. to Lake Kenogami, 12 miles, and a second branch from Labrosse Jct. to Chicoutimi Ouest, 3.4 miles, a total of 35.4 miles. The last mentioned branch is being operated by electricity, and it is proposed to electrify the company's yards at Port Alfred. The uncompleted portion of the main line has been surveyed from Ha Ha Jct., through the townships north and west of Lake St. John, to Roberval. The company's rolling stock consists of 2 electric locomotives, 4 passenger cars, 10 box cars, 168 flat cars and 2 cabooses. (Jan., pg. 20.)

**St. John & Quebec Ry.**—Chief Justice McKeown has before him in the New Brunswick Supreme Court, arbitration proceedings in the case of A. R. Gould and associates against the Provinces of New Brunswick, arising out of the expropriation by the Province of the St. John & Quebec Ry., under the provisions of a statute of 1915. The plaintiffs at that time owned all the company's capital stock, and had expended about \$4,500,000 upon the construction of 120.3 miles of railway from Centreville to Gagetown, N.B. The amount of the claim, \$334,200, is based on a percentage of the cost of the line built and on the estimated value of the stock taken over and now vested in the Provincial Government.

**Toronto, Hamilton & Buffalo Ry.**—The Dominion Parliament is being asked to ratify an agreement making traffic arrangements for a period of 50 years between the T.H. & B.R. and the Hamilton & Dundas St. Ry., under sec. 364 of the Railway Act; to extend the time for the completion of its projected railway from Port Maitland to Port Colborne; to empower it to build a line from Welland to Port Colborne, Ont.; to enable it to enter into agreements under sec. 364 of the Railway Act with the Michigan Central Rd., the Canada Southern Ry. and the Grand Trunk Ry., or any of them, for a term exceeding 21 years, and to authorize the company to hold stock in any navigation or steamboat company. (July, 1916, pg. 282.)

The Toronto City Council went through the annual farce of appointing directors to certain practically non-existent railway companies at its first meeting for the year, Jan. 8. Ald. Ryding was appointed to the Credit Valley Ry Co.; Ald. Risk to the Toronto, Grey and Bruce Ry. Co.; Ald. Nesbitt to the Ontario & Quebec Ry. Co., and Ald. Archibald to the Northern Division of the G.T.R. These companies are now absorbed into the larger railway systems, but for a variety of reasons the corporate entities have been maintained. The directors have no duties, and as one of them complained, they are practically ignored. The city claims to be entitled to a representation on the boards of these companies, on account of subsidies granted by it.

**Without Prejudice.**—“A Vancouver court is asked to decide whether a grain elevator is a building or an engineering work. The storage elevators at Vancouver and Calgary are monumental blunders.”—(Exchange.)

## Demurrage Regulations in United States.

We have been asked to publish the amended demurrage regulations passed by the Interstate Commerce Commission, Nov. 29. They are as follows:

It appearing that on Nov. 15 and 29, 1916, the commission ordered a hearing concerning the propriety of the increases and the lawfulness of the rates, charges, regulations and practices for demurrage stated in the schedules, contained in tariffs designated in said orders, and pending such hearing and decision, the operation of the schedules contained in said designated tariffs was suspended until Mar. 31, 1917; and good reason appearing therefor, it is ordered, that carriers parties to said schedules be authorized to cancel forthwith all of said schedules suspended by said orders in Investigation and Suspension Docket 966, upon notice to this commission and to the general public by not less than three days filing and posting in the manner prescribed in sec. 6 of the Act to Regulate Commerce;

It is further ordered that said carriers parties to said schedules be authorized to file new schedules making no change in the present effective form of the weather rule or average agreement, providing for 2 days free time exclusive of Sundays or legal holidays, and the following rates of demurrage after expiration of free time: \$1 for the 1st day; \$2 for the 2nd day; \$3 for the 3rd day, and \$5 for the 4th and each succeeding day; provided track storage charges shall remain in effect as at present, except where the demurrage rate is \$3 per day or more; provided further, that these provisions be embodied in tariffs fixed to expire by limitation on May 1, 1917; and provided further, that the carriers' demurrage schedules suspended by and designated in orders of Nov. 15 and 29, 1916, are contemporaneously cancelled, upon notice to this commission and to the general public by not less than three days filing and posting in the manner prescribed in sec. 6 of the Act to Regulate Commerce.

## Eastern Canadian Passenger Association.

At a meeting in Montreal, Jan. 3, the following were elected for the current year:

Chairman—E. O. Grundy.  
Executive Committee—J. F. Pierce, chairman; R. L. Fairbairn, W. H. Snell, W. S. Cookson.

Rules Committee—C. W. Johnston, chairman; W. Maughan, R. L. Fairbairn, J. W. Hanley, G. C. Martin, A. L. Miller, L. W. Landman, H. H. Melanson, F. T. Grant.

General Baggage Agents' Committee—J. O. Apps, chairman; G. C. Allen, R. L. Fairbairn, C. C. Bonter, J. E. Quick, H. P. Dearing, W. M. Skinner, A. E. Plumer.  
Secretary—G. H. Webster.

**Canadian Ticket Agents' Association.**—At an executive meeting at Toronto, Jan. 25, it was decided to hold the next annual meeting at Montreal, Sept. 25, 26 and 27. W. H. C. Mackay, City Ticket Agent, C.P.R., St. John, N.B., was elected a member of the executive committee, vice W. McIlroy, resigned on account of a change in his position rendering him ineligible.

The Quebec Legislature has ratified a grant of public lands to the Northern Colonization Ry., a C.P.R. subsidiary.

## Mainly About Railway People Throughout Canada.

**John Henderson**, Roadmaster, G.T.R., Belleville, Ont., died there suddenly from paralysis, Jan. 14.

**J. S. Dennis**, Assistant to President, C.P.R., addressed the New York Credit Men's Association recently, on Canada after the war.

**R. S. Claar**, heretofore Assistant Engineer, Duluth, South Shore & Atlantic Ry. and Mineral Range Rd., has succeeded **J. E. Bebb** as office engineer.

**T. D. Dugan**, chief clerk, Car Accountant's department, G.T.R., Montreal, died there, Jan. 4, from peritonitis. He had been in G.T.R. service 34 years.

**Mrs. G. R. R. Cockburn**, who died in Toronto, Jan. 8, was the mother of Lady Tait, wife of Sir Thomas Tait, President, Fredericton & Grand Lake Ry. & Coal Co.

**H. A. Woods**, Assistant Chief Engineer, Grand Trunk Pacific Ry., Winnipeg, has been granted leave of absence for three months. It is reported that on his return he will resign.

**G. C. Martin**, General Freight and Passenger Agent, Toronto, Hamilton & Buffalo Ry., Hamilton, Ont., has been elected President of the Hamilton Board of Trade.

**F. H. Phippen, K.C.**, General Counsel, Canadian Northern Ry., left Toronto Jan. 9, for California, accompanied by Mrs. Phippen and son, who will stay there for some time.

**J. E. Burgess**, assistant chief clerk in the office of Vice President and General Manager, Western Lines, C.P.R., Winnipeg, died there, Jan. 10, from Bright's disease, aged 26.

**J. T. Arundel**, General Superintendent, Ontario Division, C.P.R., who is on leave of absence on account of ill health, left Toronto Jan. 7, for Cuba, intending to spend some weeks there.

**Lord Shaughnessy**, President, C.P.R. telegraphed the company's officials and employes on Dec. 30: "My very best wishes for the new year. May it bring peace on the terms of Britain and her allies."

**Frederic Nicholls**, who has been appointed to the Senate, is a director of the Canadian Northern Ry., and Toronto Ry., and President, Canadian General Electric Co., and Canadian Allis Chalmers Co., Toronto.

**George Mercer**, formerly General Foreman, Duluth, South Shore & Atlantic Ry. and Mineral Range Rd., has been appointed Superintendent of Bridges and Buildings for those companies. Office, Marquette, Mich.

**L. B. Archibald**, Superintendent, Sleeping, Dining and Parlor Cars Department, Canadian Government Railways, Halifax, N.S., who had been on leave of absence through illness, for three months, returned to duty Jan. 1.

**Capt. A. T. Shaughnessy**, son of Lord Shaughnessy, who was killed at the front some months ago, had a seat on the Montreal Stock Exchange, as one of C. Meredith & Co.'s floor members. It was sold recently for \$22,000.

**Peter T. Shelby**, a retired official of the Great Northern Ry. who served under Gen. J. F. Casement, contractor for the construction of a large part of the Union Pacific Rd., in the late sixties, died in Cleveland, Ohio, recently.

**J. N. deStein**, M.Can.Soc.C.E., Resident Engineer, Grand Trunk Pacific Ry., Re-

gina, Sask., read a paper before the Canadian Society of Civil Engineers, Regina Branch, Jan. 4, on the railway from its conception to its completion.

**Sir William D. Reid**, President, Reid Newfoundland Co., who is said to have been interested in the Daily Mail, Montreal, is defendant in a personal suit by **B. A. MacNab**, ex editor of that paper, on an alleged claim for \$20,700.

In commenting on the recent visit of **George Bury**, Vice President of the C.P.R. to England, one of the London dailies stated recently, "He is considered both in Canada and the U.S. to be one of the greatest transport experts in the world."

**Lord Shaughnessy**, who was mentioned recently in a Chicago press dispatch, as likely to become a member of the British



**G. A. Montgomery**, Vice President and General Manager, Algoma Central & Hudson Bay Railway.

Cabinet, or to be asked to settle the Irish problem, has stated that such rumors are the creation of a newspaper imagination.

**G. McL. Brown**, European Manager, C.P.R., who has been visiting Canada for a few weeks, accompanied by Mrs. Brown, has returned to London, Eng. Both Mr. and Mrs. Brown addressed a number of meetings on war topics whilst in Canada.

**P. B. Robb**, chief clerk, Car Service Department, Canadian Government Railways, Moncton, N.B., was presented with a travelling bag and an address on leaving Moncton, Jan. 11, for Winnipeg, where he has been transferred to the same department.

**Gideon Robertson**, of Welland, Ont., who has been appointed to the Senate, is head of the Order of Railway Telegraphers. He took a prominent part at Winnipeg recently in bringing about an agreement between the C.P.R. and several branches of its employes.

**H. E. Whittenberger**, General Superintendent, Ontario Lines, G.T.R., Toronto, met with a painful accident recently when the brake lever on the rear of his

official car flew round and struck him on the forehead with considerable force, necessitating a stitching of the wound.

**L. V. Druce**, Commercial Agent, Grand Trunk Pacific Ry., Vancouver, was presented with a purse of money by a number of friends and members of the Vancouver Transportation Club recently, on leaving for Edmonton, Alta., where he has been appointed Division Freight Agent.

**Thos. J. Wall**, General Agent, Passenger Department, C.P.R., Chicago, and his staff, sent out a unique Christmas and New Year greeting card in the shape of the company's trade mark, surmounted by the Canadian beaver and containing several views on the company's railway and steamship lines.

**J. L. Englehart**, Chairman, Timiskaming & Northern Ontario Ry. Commission, Toronto; **W. I. Gear**, Vice President, Robert Reford Co., steamship agents, Montreal; and **P. J. Myler**, Vice President, Canadian Westinghouse Co., Hamilton, Ont., have been re-elected directors of the Bank of Toronto.

**W. W. Sloan**, of the Secretary's Department, Canadian Northern Ry., Toronto, is President, and **F. C. Annessley**, private secretary to Sir William Mackenzie, is a director, of the Murray-Mogridge Mining Co., Ltd., of which Hon. Lt. Gen. Sir Sam Hughes is President, and which offered 100,000 shares for sale recently.

**B. F. Runkle**, whose appointment as Track Supervisor, Canadian Northern Ry. Hornepayne, Ont., was announced in our last issue, has been in C.N.R. service for the past four years, as section foreman and gang foreman on the construction of the line from Port Arthur, Ont., easterly. He was formerly employed on railway construction in Wisconsin.

**G. H. Dawson**, Surveyor General of British Columbia since 1911, has resigned to attend to his private affairs. Born in Quebec, about 50 years ago, he went to the Pacific Coast in 1889, after being in the C.P.R.'s Engineering Department, on the Quebec Division, for some three years. Latterly he has been acting as western representative, Imperial Munitions Board.

**W. J. Underwood**, formerly General Manager, Chicago, Milwaukee & St. Paul Ry., and brother of **F. D. Underwood**, President, Erie Rd., died Jan. 3, aged 65. He entered the company's service as a brakeman, in Oct. 1872, becoming successively conductor, Division Superintendent, Assistant General Superintendent, General Superintendent, Assistant General Manager and General Manager.

**Thomas Fawcett**, who has been appointed General Storekeeper, Western Lines, C.P.R., Winnipeg, entered C.P.R. service in 1905 as clerk in the Vice President's office, Winnipeg. Later he was successively, chief clerk, Paymaster's office; chief clerk, Local Treasurer's office; Paymaster, Calgary, Alta., and from 1911 to Nov. 30, 1915, General Fuel Agent, Winnipeg, and from Nov. 30, 1915, to the date of his present appointment, Assistant General Storekeeper, Western Lines, Winnipeg.

**P. J. M. Woslyng**, formerly Roadmaster, Aldersyde Branch, C.P.R., died at Lethbridge, Alta., Jan. 8, after an illness lasting over a year. He was born in Sweden in 1873, and came to Canada at the age of 18, and entered C.P.R. service, being engaged on construction and mainten-

ance. He later transferred to the Alberta Ry. & Irrigation Co., and was in that service for two years, until the company was taken over by the C.P.R.

**L. V. Druce**, who has been appointed Division Freight Agent, Grand Trunk Pacific Ry., Edmonton, Alta., was born at London, Eng., Oct. 20, 1873, and entered railway service in Aug., 1896, at Los Angeles, Cal., and was, from Mar. 1897 to Aug. 1904, Agent, Seattle, Wash.; Aug. 1904 to May 23, 1910, Commercial Agent, Seattle, Wash.; May 23, 1910 to Dec. 21, 1916, Commercial Agent, G.T.R., G.T.P.R. and G.T.P. Coast Steamship Co., Vancouver, B.C.

**Thomas Turner**, who died at Niagara Falls, Ont., Jan. 4, aged 91, came to Canada in 1854, the year of the opening of the Great Western Ry. from Hamilton to Niagara Falls. He was in that company's service, and transferred to the G.T.R. when it took over the Great Western, and occupied various positions throughout Ontario. He was yard foreman at Niagara Falls for many years, and roadmaster there of Delhi and Fort Erie, until he was superannuated about 20 years ago.

**Robt. Kerr**, who was Passenger Traffic Manager, C.P.R., when he retired Sep. 10, 1910, and who died at Toronto, Dec. 9, 1916, left an estate of \$21,720, of which \$10,220 was life insurance, \$2,750 household goods and personal effects, \$2,250 stock of Great West Life Assurance Co., and \$6,500, his house on Madison Ave., Toronto. To his son, Frederick C., he left the gold watch given him by the citizens of Winnipeg, and to his widow, a life interest in the residue of the estate, which at her death passes to their three daughters.

**William Burton Johnson**, whose appointment as Master Mechanic, District 6, Intercolonial Division, Canadian Government Railways, Truro, N.S., was announced in our last issue, and whose portrait appears in this issue, was born there, Oct. 8, 1872, and entered the Intercolonial Ry. service in 1888, since when he has been, to 1890, messenger, Traffic Department, Truro, N.S., 1890 to 1900, fireman; 1900 to 1913, locomotive man; 1913, standard rule instructor, St. John, N.B., and Halifax, N.S.; 1914 to Dec. 1916, locomotive man, Dartmouth, N.S.

**George C. Gahan** (not Cahan as mentioned in our last issue), who has been appointed Assistant General Auditor, C.P.R., Montreal, was born there, Dec. 28, 1874, and entered C.P.R. service in April, 1890, since when he has been, to Oct. 1891, junior clerk, Auditor of Freight and Telegraph Receipts' office; Oct. 1891 to Aug. 1896, junior clerk, Auditor of Disbursements' office; Aug. 1896 to Dec. 1, 1916, clerk, bookkeeper and chief clerk, successively, in Comptroller's and General Auditor's offices, all in Montreal.

**L. J. Rouleau**, who has been appointed Commercial Agent, G.T.R., Quebec, Que., was born at Montreal, Jan. 6, 1879, and entered G.T.R. service, Apr. 1, 1899, since when he has been, to Mar., 1903, clerk and timekeeper, Local Freight Department, Montreal; Mar., 1903, to Nov., 1905, claims investigator, Freight Claims Department, Montreal; Nov., 1905, to Apr., 1907, rate clerk, Division Freight Office, Montreal; Apr., 1907, to Apr., 1909, Soliciting Freight Agent, Montreal; Apr., 1909, to Dec. 30, 1916, Travelling Freight Agent, G.T.R., and Agent, National Dispatch-Great Eastern Line, Montreal.

**J. Russell Brent**, who was appointed Night Chief Dispatcher, G.T.R., London, Ont., recently, was born at Strathroy,

Ont., Aug. 16, 1889, and entered G.T.R. service Aug. 16, 1906, since when he has been, to June 1, 1907, operator at various stations; June 1, 1907, to June 14, 1908, operator, Komoka, Ont.; June 14, 1908, to June 1, 1909, operator, Burlington Jct., Ont.; July 1, 1909, to Aug. 30, 1910, day operator, Sarnia Tunnel; Aug. 30, 1910, to Feb. 1, 1913, relay operator, London, Ont.; Feb. 1 to Dec. 1, 1913, relieving dispatcher, London, Ont.; Dec. 1, 1913, to Nov. 15, 1916, dispatcher, London, Ont.

**Leon Spoor Landers**, who has been appointed Assistant Engineer, Canadian Government Railways, Levis, Que., was born at Farnham, Que., Dec. 15, 1888, and entered railway service in May, 1910, since when he has been, to Feb., 1911, rod man, C.P.R., Farnham, Que.; Feb., 1911, to Mar., 1912, draughtsman, Resident Engineer's office, Eastern Division, C.P.R., Montreal; Mar., 1912, to Oct., 1913, transit man, C.P.R.; Oct., 1913, to May, 1915, transit man, District 4, Intercolonial Ry., New Glasgow, N.S.; May, 1915, to Jan.,

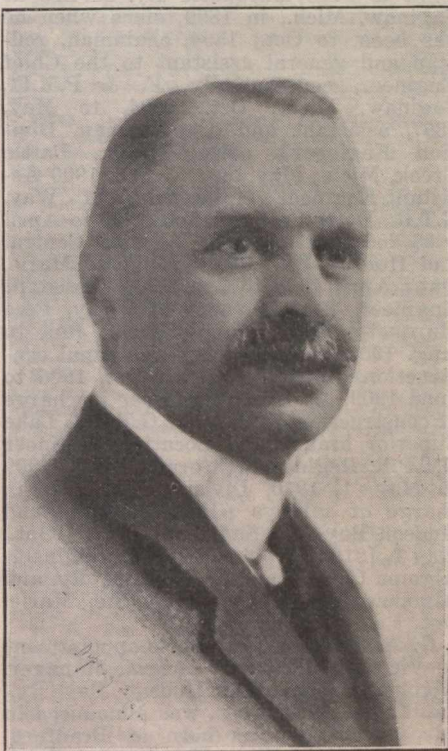
private secretary to the Superintendent, Southern Division, G.T.R., Hamilton, Ont.; remaining in that position until the abolition of the company's general offices there, early in 1893. On Mar. 1, 1893 he entered C.P.R. service as secretary to the President (Sir William Van Horne), and on Sir William's retirement from the Presidency in 1899, he remained in the same capacity with Sir Thomas Shaughnessy, until July 1908, when he was appointed Assistant Treasurer, and in Aug. 1912, was appointed Assistant Secretary.

**Walter R. Eastman**, who has been appointed New England Passenger Agent, G.T.R., Boston, Mass., was born at Hartland, Vt., Apr. 15, 1875, and entered Central Vermont Ry. service, Nov. 19, 1899, since when he has been, to Feb., 1900, transfer foreman yard clerk, Brattleboro, Vt.; Feb. to Mar., 1900, clerk, Montville, Conn.; Mar., 1900, to Jan., 1901, billing clerk, White River Jct., Vt.; Jan. to Apr., 1901, billing clerk, Burlington, Vt.; Apr., 1901, to Apr., 1903, ticket clerk, St. Albans, Vt.; Apr., 1903, to May, 1906, Travelling Passenger Agent, St. Albans, Vt.; May, 1906, to Jan. 1, 1917, chief clerk, General Passenger Agent, St. Albans, Vt.

**John D. McAuley**, who has been appointed Commercial Agent, Grand Trunk Pacific Ry., and G. T. P. Coast Steamship Co., Prince Rupert, B.C., was born in Plantaganet, Ont., June 11, 1884, and entered railway service Oct. 1904, since when he has been, to Dec. 1908, in Local Freight Department, G.T.R., Montreal; Dec. 1908 to June 1911, in Freight Claims Department, G.T.R., Montreal; June 1911 to Sept. 1913, in Foreign Freight Department, G.T.R., Montreal; Sept., 1913, to Sept. 1914, City Freight Agent, Grand Trunk Pacific Ry., Vancouver, B.C.; Sept. 1914 to Mar. 1, 1916, City Freight Agent, G.T.P.R., Regina, Sask.; Mar. 1 to Dec. 21, 1916, Travelling Freight and Passenger Agent, G.T.P.R. and G.T.P.C.S. Co., Juneau, Alaska.

**George N. Goad**, who has been appointed Terminal Trainmaster, Toronto Terminals, Canadian Northern Ry., was born in Toronto, Nov. 26., 1884, and entered railway service in Sept., 1901, since when he has been, to July, 1902, junior clerk, Division Freight Agent's office, G.T.R., Toronto; July, 1902, to Sept., 1904, stenographer, same office; Sept., 1904, to Dec., 1905, chief clerk, Canadian Freight Agent's office, Lehigh Valley Rd., Toronto; Dec., 1905, to Mar., 1907, stenographer, Third Vice President's office, Canadian Northern Ry., Toronto; Mar., 1907, to Aug. 31, 1915, chief clerk to Superintendent and General Superintendent, C.N.R., Toronto; Sept. 1 to Dec. 31, 1915, chief clerk to General Manager, Eastern Lines, C.N.R., Toronto; Dec. 31, 1915, to Jan. 10, 1917, Inspector of Transportation, Eastern Lines, C.N.R., Toronto.

**Alfred Erwin McMaster**, who resigned recently from railway service on his appointment as Assistant Secretary for British Columbia, Canadian Manufacturers' Association, Vancouver, was born at Perth, Ont., Oct. 22, 1885, and entered railway service in 1902, since when he has been, to May 1903, in Freight Department, C.P.R., Keewatin, Ont.; May 1903 to Aug. 1907, in various position up to assistant agent, C.P.R., Port Arthur, Ont.; Aug. 1907 to Aug. 1908, agent, and chief clerk to Superintendent, Grand Trunk Pacific Ry., Fort William, Ont.; Aug. 1908 to July 15, 1913, agent, and General Agent, G.T.P.R., G.T.R. System, and Grand Trunk Pacific Coast Steamship Co., Prince Rupert, B.C.; July 15, 1913 to Sept. 30, 1916, Commercial Agent, G. T. P. R., Regina, Sask.; Sept. 30 to Dec. 21,



**E. Alexander**,  
Secretary, Canadian Pacific Railway Company.

1917, Resident Engineer, District 4, Intercolonial Division, Canadian Government Railways, Truro, N.S.

**David Frazer Thomas**, whose appointment as General Manager, Algoma Eastern Ry., Sudbury, Ont., was announced in our last issue, was born in Halton County, Ont., Apr. 20, 1867, and commenced his railway career in 1886, since when he has been, to 1887, section man, Port Huron and North Western Ry., 1887 to 1891, learning electrical business with Westinghouse Co.; 1891 to 1897, on U. S. engineering staff on construction of Poe locks, Sault Ste. Marie Canals; 1897 to 1903, on engineering staff, Michigan Lake Superior Power Co., Sault Ste. Marie, Mich.; 1903 to Dec. 1, 1916, Superintendent, Trans St. Marys Traction Co., and International Transit Co., ferry and street railway, Sault Ste. Marie, Mich.

**Ernest Alexander**, who has been appointed Secretary, C.P.R. Co., Montreal, and whose portrait appears in this issue, was born in Yorkshire, Eng., Dec. 8, 1862, and commenced railway work in 1882 as

1916, Division Freight Agent, G.T.P.R., Edmonton, Alta.

**William Bedford Harper**, who has been appointed Resident Engineer, Laurentian Division, Quebec District, C.P.R., Montreal, was born at Baie Verte, N.B., Aug. 15, 1882, educated at Queen's University, Kingston, Ont., and entered railway service in 1903, since when he has been, to 1906, rod man, leveller and transit man, Nova Scotia Ry., and Cape Breton Ry., at Halifax, New Glasgow and Sydney, N.S.; June, 1906, to May, 1908, transit man on location and preliminary surveys, and Resident Engineer on construction, Canadian Northern Ry., Parry Sound, Ont.; June, 1908, to June, 1911, Resident Engineer on construction, National Transcontinental Ry., Nipigon, Ont.; June, 1911, to Ap., 1915, Assistant Engineer, double track and bridge construction, C.P.R., Montreal; Apr., 1915, to Dec., 1916, Assistant Engineer in charge of construction, Quebec Terminals, C.P.R., Quebec, Que.

**William Mitchell Hood**, whose appointment as District Freight and Passenger Agent, Canadian Northern Ry., Sudbury, Ont., was announced in our last issue, was born at Harrow, Ont., Nov. 25, 1865, and entered railway service, Nov. 1, 1892, since when he has been, to Mar., 1900, station agent, Lake Erie & Detroit River Ry., McGregor, Ont.; Apr. to Aug., 1900, Soliciting Freight and Passenger Agent, same road, Cleveland, Ohio; Sept., 1900, to Nov., 1901, Travelling Freight and Passenger Agent, same road, Walkerville, Ont.; Dec., 1901, to Aug., 1905, Local Freight Agent, Pere Marquette Rd., Sarnia, Ont.; Sept., 1915, to Feb., 1911, Local Freight Agent, same road, Chatham, Ont.; Mar., 1911, to Feb., 1913, Travelling Passenger Agent, same road, London, Ont.; Mar., 1913, to Jan., 1915, Travelling Passenger Agent, Canadian Northern Ry., Toronto; Feb. to Nov., 1915, City Freight and Passenger Agent, same road, Oshawa, Ont.; Dec., 1915, to Dec., 1916, Travelling Freight and Passenger Agent, same road, North Bay, Ont.

**Albert Davidson**, who has been appointed Commercial Agent, Grand Trunk Pacific Ry., and G.T.P. Coast Steamship Co., Vancouver, B.C., was born at St. Henri, Montreal, Jan. 29, 1885, and entered railway service, Aug. 22, 1899, since when he has been, to Nov., 20, 1901, clerk, Foreign Freight Department, C.P.R., Montreal; Nov. 20, 1901, to Mar. 16, 1903, clerk, Vice President's office (Traffic), C.P.R., Montreal; Mar. 16, 1903, to Aug. 15, 1904, stenographer, General Freight Department, C.P.R., Vancouver, B.C.; Aug. 15, 1904, to Mar. 23, 1905, secretary to Assistant Freight Traffic Manager, C.P.R., Winnipeg; Mar. 23, 1905, to Apr. 1, 1909, tracing, claims, rate and steamship clerk, General Freight Office, C.P.R., Vancouver, B.C.; April 1 to Oct. 1, 1909, chief clerk to Assistant General Freight Agent, C.P.R., Vancouver, B.C.; Oct. 1, 1909, to June 1, 1910, Travelling Freight Agent, Steamship Lines, C.P.R., Vancouver, B.C.; June 1, 1910, to July 15, 1913, City Freight Agent, G.T.R., G. T. Pacific Ry. and G. T. Pacific Steamship Co., Vancouver, B.C.; July 15, 1913, to Dec. 21, 1916, General Agent, G. T. R. System, and Commercial Agent, G.T.P.R., and G.T.P. C.S. Co., successively.

**A. B. Calder**, who has been appointed Assistant General Passenger Agent, C. P. R., Montreal, and whose portrait appears in this issue, was born at London, Ont., Aug. 24, 1867, and from 1882 to 1887 was engaged in various capacities on C.P.R. construction west of Brandon, Man. He entered C.P.R. service in 1887, since when

he has been, to 1889, in Passenger Department, Winnipeg; 1889 to Oct. 1893, ticket clerk, Tacoma, Wash.; Oct. 1893 to July, 1895, Travelling Passenger Agent, Tacoma, Wash.; July 1895 to Dec. 1897, Travelling Passenger Agent, San Francisco, Cal.; Dec. 1897 to Nov. 1904, Travelling Passenger Agent, Tacoma, Wash.; July 1895 to Dec. 1897, Travelling Passenger Agent, San Francisco, Cal.; Dec. 1897 to Nov. 1904, Travelling Passenger Agent, Seattle and Tacoma, Wash.; Nov. 1904 to Nov. 1910, General Agent, Passenger Department, Seattle, Wash.; Nov. 1910, to Sept. 1911, General Agent, Passenger Department, Chicago, Ill.; Sept. 1, 1911 to Jan. 1916, associated with his father in a general ticket agency at Winnipeg.

**R. S. McCormick**, M.Can.Soc.C.E., who has been appointed General Superintendent and Chief Engineer, Algoma Central & Hudson Bay Ry., Sault Ste. Marie, Ont., was born at Quaker City, Guernsey Co., Ohio, June 22, 1873, and entered Flint & Pere Marquette Ry. service at Saginaw, Mich., in 1890, since when he has been, to Oct., 1894, chainman, rodman and general assistant to the Chief Engineer, consecutively, F. & P.M.R., Saginaw, Mich.; Oct., 1894, to May, 1897, assistant and draughtsman, Division Engineer's office, G.T.R., Battle Creek, Mich.; May 1897 to Feb. 1900 Assistant Engineer Maintenance of Way, G.T.R., Detroit, Mich.; Feb. 1900 to April 1903 locating engineer Algoma Central and Hudson Bay Ry., Sault Ste. Marie, Ont.; April 1903 to Jan. 1904, Assistant Engineer Maintenance of Way, Pere Marquette Rd., Saginaw, Mich.; June to Aug. 1906, engineer on barge canal construction, Rochester, N.Y.; Oct. 1906 to June 1909, Assistant Engineer in charge of construction of 50 miles G.T.P.R. Lake Superior branch and Locating Engineer G.T.P.R. Regina north branch; July 1909 to May 1, 1910, Division Engineer in charge of surveys Algoma Central and Hudson Bay Ry., Sault Ste. Marie, Ont., May 1, 1910 to Nov. 1916, Chief Engineer, Algoma Central and Hudson Bay Ry. and Algoma Eastern Ry., Sault Ste. Marie, Ont.

**G. A. Montgomery**, whose appointment as Vice President and General Manager, Algoma Central and Hudson Bay Ry., Sault Ste. Marie, Ont., was announced in our last issue, was born at Bradford, Ont., Feb. 11, 1871, and entered railway service, Sept. 1, 1886, since when he has been, to Sept. 1887, assistant to agent, Northern Ry., Newmarket, Ont.; Sept. 1887 to March 1889, agent, G.T.R., Powassan, Ont.; March 1889 to March 1890, freight clerk, C.P.R., North Bay, Ont.; March 1890 to June 1893, chief clerk, freight department, C.P.R., Sudbury, Ont. June to Aug. 31, 1893, relieving agent, C.P.R., Lake Superior Division; Aug. 31, 1893 to June 1900, chief clerk to Superintendent, District 1, Lake Superior Division, C.P.R., North Bay, Ont.; June 1900 to Aug. 28, 1902, chief clerk to General Superintendent, Algoma Central and Hudson Bay Ry., Sault Ste. Marie, Ont.; Aug. 28, 1902 to Aug. 15, 1910, Superintendent, Algoma Eastern Ry., Sudbury, Ont.; Aug. 15, 1910, to Mar. 1, 1911, Superintendent, Algoma Central and Hudson Bay Ry., Michipicoten Harbor, Ont.; Mar. 1, 1911, to Oct. 15, 1913, Superintendent, same road, Sault Ste. Marie, Ont.; Oct. 15, 1913, to the date of his present appointment, General Superintendent, same road, and Algoma Eastern Ry., Sault Ste. Marie, Ont.; Sept. to Nov., 1916, acting General Manager for the Receivers, A. C. & H. B. R., and acting General Manager,

**John Stoughton Dennis**, who has been elected President of the Canadian Society of Civil Engineers for the current year, was born at Toronto in 1856, the son of the late Lt. Col. J. S. Dennis, who was the first Surveyor General of Canada, and subsequently the first Deputy Minister of the Interior. He was educated at the Toronto and Kingston Grammar Schools, and Upper Canada College, Toronto, and graduated from the old military school at Kingston, Ont., before the establishment of the Royal Military College there. He served articles as a Dominion land surveyor with the late Lindsay Russell, Assistant Surveyor General, and was appointed Dominion topographical surveyor in 1877. From 1872 to 1879, he was engaged on survey work for the Dominion Government in Manitoba and the North West Territories, and from 1879 to 1882, was engineer and surveyor for the Hudson's Bay Co., and laid out what is now the southern part of the city of Winnipeg, constructing the first trunk sewer there. In 1882 he became a member of Vaughan, Dennis and Co., consulting engineers, Winnipeg, and in 1885 entered Dominion Government service as Inspector of Surveys, becoming Chief Inspector in 1892. In 1896 he entered the Northwest Territories Government service and in 1899 was appointed Deputy Minister of Public Works, Northwest Territories. He entered C.P.R. service in 1902, as Superintendent of Irrigation and Chief Engineer of Irrigation Works, then being carried out in Alberta. He was subsequently appointed Land Commissioner for British Columbia, and in 1904, Assistant to the Second Vice President. In 1910 he was appointed Manager of Irrigation, and Assistant to the President, C.P.R., at Calgary, Alta., and was removed to Montreal, Nov. 1, 1916. After graduating from the military school, he served for a short time as lieutenant of the Governor General Foot Guards at Ottawa, and in 1885, commanded, as captain, the Intelligence Scout Corps attached to General Middleton's column, during the Riel rebellion, being mentioned in dispatches for service at the battle of Batoche. He was later transferred to the reserve of officers with the brevet rank of major, and in 1916 was appointed lieutenant colonel commanding the Calgary battalion of the reserve militia. He joined the Canadian Society of Civil Engineers as a member, Nov. 21, 1901, was a councillor for 1906 and 1911, and was Vice President in 1907. He is a past President of the American Society of Irrigation Engineers.

**The Grain Growers' Grain Co., Ltd.**, is applying to the Dominion Parliament for authority to change its name to United Grain Growers, Ltd., or to empower it to adopt the name by by-law; to enable meetings to be held elsewhere than at the head office at Winnipeg; to increase the capital stock to \$5,000,000; to enable shareholders to hold 100 shares each; to extinguish the right of proxy voting, and to enable the company by by-law to form shareholders in groups and to provide for representation at meetings of the company of such groups by delegates.

**Increase in Cartage Rates.**—The carriers contemplate making some changes in their carriage rates east of Port Arthur on Mar. 1. Car load lots will not be affected, but it is proposed, among other things, to advance the minimum charge of "smalls" from 20c to 23c, which will include shipments up to 575 lb. The proposed changes will have to be approved by the Board of Railway Commissioners before becoming effective.

# Orders by Board of Railway Commissioners for Canada.

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

The dates given of orders, immediately following the numbers, are those on which the hearings took place, and not those on which the orders were drawn.

General order 174, suspending Canadian Car Service Rules 1, 2, 6 and 15 from Jan. 1, to Apr. 30, 1917, and substituting others. These were published in full in our last issue.

General order 175, Dec. 26, 1916.—Prescribing charges for demurrage and track storage on grain and lumber held in transit at Cartier, Ont., etc. from Jan. 1 to Apr. 30, 1917. This order is given in full on another page.

General order 176, Dec. 26, 1916.—Re car supply for coal traffic. This order is given in full on another page.

General order 177, Jan. 10, 1917.—Ordering that tariff of freight rates from points in U.S. to points in Canada include or be supplemented by rule to the effect that said rates, unless specifically indicated as being competitive, will apply to intermediate points in Canada not enumerated in said tariffs, and that railway companies arrange accordingly. This order is given in full on another page.

25728, 25729. Dec. 11.—Recommending to Governor in Council for sanction agreements between Vancouver, Victoria & Eastern Ry. & Navigation Co. and Canadian Northern Pacific Ry. for joint use of V.V. & E. Ry. & N.Co.'s tracks between New Westminster and Vancouver and C.N.P.R. tracks between Hope and Sumas Landing, B.C.

25730. Dec. 18.—Extending to Feb. 18, 1917, time for construction by C.P.R. of siding for Dominion Sugar Co., Chatham, Ont., as authorized by order 24704, Feb. 1, 1916.

25731. Dec. 19.—Dismissing J. A. Kammerer's complaint against refusal of C.P.R. to place car for him on private siding.

25732. Dec. 19.—Authorizing C.P.R. and Canadian Northern Ontario Ry. to operate over connection with C.N.O.R. near Current River, Ont.

25733. Dec. 20.—Authorizing G.T.R. to build spur for National Iron Works, Toronto.

25734. Dec. 20.—Authorizing Algoma Central & Hudson Bay Ry. to operate over crossing of Canadian Northern Ontario Ry. at mileage 80.54, Port Arthur to Sudbury Branch.

25735. Dec. 18.—Approving agreement between Bell Telephone Co. and South McNaughton Telephone Co., Renfrew County, Ont.

25736. Dec. 19.—Authorizing C.P.R. to build spur for Thompson & Norris Co. of Canada, Montreal.

25737. Dec. 20.—Approving Moncton & Buctouche Ry. standard freight mileage tariff, C.R.C. 23.

25638. Dec. 22.—Relieving G.T.R. from speed limitation of 10 miles an hour over crossing at St. Hilaire, Que.

25739. Dec. 20.—Authorizing G.T.R. to build siding for Tudhope Carriage Co., Orillia, Ont.

25740. Dec. 21.—Extending to Jan. 31, 1917, time for installation by G.T.R. of gates at Bronson Ave., Ottawa, Ont.

25741. Dec. 21.—Ordering C.P.R. to stop train 51, on flag, at Langenburg, Sask., on Sundays.

25742. Dec. 21.—Ordering G.T.R. to repair fence on south side of Sunnyside Bridge, Toronto, one third of cost to be paid by the city.

25743. Dec. 21.—Authorizing G.T.R. to build two spurs and to extend existing siding for Willys-Overland, Ltd., Toronto.

25744. Dec. 20.—Authorizing G.T.R. to build spur for British American Oil Co., Toronto.

25745. Dec. 22.—Authorizing Edmonton, Dunvegan & British Columbia Ry. to build spur to Cambrian collieries and to cross road between n.e. ¼ and n.w. ¼, Sec. 9, Tp. 55, R. 24, w.4m., Alta.

25746. Dec. 21.—Authorizing Canadian Northern Ry. to build spur to coal mine in n.w.¼, Sec. 14, Tp. 49, R. 18, w.4m., at Dodds, Alta.

25747. Dec. 22.—Authorizing G.T.R. to build extension to spur for W. H. Banfield & Sons, Toronto.

25748m. Dec. 22.—Authorizing C.P.R. to build spur for Energete Explosives Co., Horton Tp., Ont.

25749. Dec. 21.—Amending Bell Telephone Co.'s tariff, C.R.R. 2537, re rates for Toronto Island rate area (Summer service).

25750. Dec. 22.—Authorizing C.P.R. to use bridge 35.8, Brandon Subdivision, Manitoba District.

25751. Nov. 29.—Ordering C.P.R. to build pedestrian subway under its tracks in Virden, Man., from station platform opposite Wellington St., to north of track.

25752. Dec. 22.—Authorizing Mathias Range Aqueduct Co. to lay water pipe under Quebec & Lake St. John Ry. in Chicoutimi, Que. Subsequently suspended. See or 25799.

25753. Dec. 22.—Ordering G.T.R. and C.P.R. to install gates operated by day and night watchman at Church St., Welland, Ont.

25754. Dec. 27.—Postponing, pending decision of Supreme Court, upon questions to be submitted

and until further order the effective date of Great North Western Telegraph Co.'s tariff C.R.C. 47, effective Jan. 1, 1917. See another page in this issue under Telegraph, Telephone and Cable Matters.

25753. Dec. 26.—Dismissing application of Harry Horne Co., Toronto, for same specific classification for health salts as provided in Canadian Freight Classification for Epsom salts.

25756. Dec. 26.—Authorizing G.T.R. to build spur on Lachine Canal reserve, Montreal, and to operate over proposed C.P.R. track to be laid on lots 3412-9-8-7-6-6, Montreal Parish.

25757. Dec. 26.—Authorizing C.P.R. to build a spur for Dominion Flour Mills, Ltd., on Lachine Canal North Bank Branch in lot 3412-9-8-7-6-5, Montreal Parish.

25758. Dec. 22.—Authorizing Town of Sudbury, Ont., to build highway under Canadian Northern Ontario Ry. to connect Leslie and Murray Sts.

25759. Dec. 26.—Authorizing Canadian Northern Ontario Ry. to cross side road between lots 6 and 7, Gloucester Tp., Ont.

25760. Dec. 27.—Authorizing North American Collieries, Ltd. (Lethbridge Colliery), to extend its main west entries, comprising 3 tunnels 8 x 6 ft., across C.P.R. right of way, about 600 ft. below the surface in n.w. ¼ Sec. 16 and s.w. ¼ Sec. 21, Tp. 9, R. 22 w.4m.

25761. Dec. 28.—Ordering C.P.R. to file supplement to its tariff C.R.C. no. W-2214, continuing rate on forest products for distances over 500 miles.

25762. Dec. 27.—Ordering Canadian Northern Ry. to erect standard third class station at Mikado, Sask.

25763. Dec. 22.—Authorizing Canadian Northern Ry. to close and divert traffic on the east and west road allowance in n.e. ¼, Sec. 11, Tp. 8, R. 19, w.2m.

25764. Dec. 30.—Authorizing Toronto, Hamilton & Buffalo Ry. and Lake Erie & Northern Ry., pending construction of permanent interchange track authorized by order 25570, Oct. 27, to interchange cars on temporary connecting track, Brantford, Ont.

25765. Dec. 27.—Ordering C.P.R. to maintain crossing on south boundary of Lot 12, Con. 10, Markham Tp., Ont., for joint use of Mrs. H. Hagerman and A. Bradley, and for future owners of either or both properties.

25766. Dec. 28.—Extending to Feb. 28, 1917, time for installation by C.P.R. of electric bell at crossing of road allowance between Lot 22, Con. 1, and Lot 22, Broken Front Concession, Darlington Tp., Ont.

25767. Dec. 28.—Authorizing Canadian Northern Ontario Ry. to build spur for Pointe Anne Quarries, Ltd., at mileage 126 from Toronto, in Thurlow Tp., Ont.

25768. Dec. 28.—Authorizing Canadian Northern Quebec Ry. Co. to build spur for Hepburn Bros., at mileage 174.04, Longue Pointe Parish, Montreal.

25769. Dec. 29.—Authorizing C.P.R. to cross Icelandic River Road at Arborg, Man.

25770. Dec. 27.—Authorizing Grand Trunk Pacific Ry. to build spur from its main line in n.w. ¼ Sec. 18, Tp. 40, R. 22, w.3m., at Unity, Sask.

25771. Dec. 28.—Approving C.P.R. plan of proposed overhead crossing at London St., Windsor, Ont.

25772. Jan. 3, 1917.—Authorizing A. D. McCormack, Castor, Alta., to build tunnel under Calgary & Edmonton Ry., Lacombe Branch, top of tunnel to be at least 30 ft. below track level.

25773. Dec. 28, 1916.—Authorizing C.P.R. to build second track across road allowance between Secs. 5 and 6, Tp. 12, R. 5, w.4m., Alta.

25774. Dec. 28.—Authorizing C.P.R. and G.T.R. to operate over interlocking plant at spur to Dominion Sugar Co., Chatham, Ont.

25775. Dec. 28.—Dismissing City of Ottawa's application for order directing G.T.R. to build highway crossing over its track at Spadina Ave.

25776. Jan. 3, 1917.—Authorizing C.P.R. to build four sidings for Canadian Nitro-Products, Ltd., York Tp., Ont.

25777. Jan. 5.—Extending to May 31 time for construction by C.P.R. of siding and loading platform facilities at mileage 2, Moose Jaw North Westerly Branch, Sask.

25778. Jan. 4.—Authorizing Canadian Northern Quebec Ry. to build spur for International Mfg. Co., Longue Pointe Parish, Montreal.

25779. Jan. 4.—Amending order 25763, Dec. 22, 1916, re closing of road allowance by Canadian Northern Ry. between Secs. 11 and 14 and Secs. 11 and 12, Tp. 8, R. 19, w.2m.

25780. Jan. 3.—Approving agreement between Bell Telephone Co. and Falls Line Telephone Co., Durham County, Ont., Dec. 13, 1916.

25781. Jan. 3.—Approving location and plans of ferry dock shelter to be erected by G.T.R. for passengers using car ferry at Cobourg, Ont.

25782. Jan. 5.—Authorizing Niagara, St. Catharines & Toronto Ry. to build deck plate girder span to replace existing structure across Ormond St., Thorold, Ont.

25783. Jan. 8.—Approving Algoma Eastern Ry. bylaw authorizing J. P. Mader, General Agent, to prepare and issue tariffs of tolls.

25784. Jan. 4.—Authorizing Canadian Northern

Quebec Ry. to build spur for Laurentide Co., Grand Mere, Que.

25785. Jan. 5.—Ordering C.P.R. to erect station at Evesham, Sask.

25786. Jan. 8.—Ordering C.P.R. to install improved type of automatic bell at Duke St. crossing, Guelph, Ont.

25787. Jan. 8.—Amending order 25593, Nov. 2, 1916, re crossing of Michigan Central Rd. by Niagara, Welland & Lake Erie Ry. by a subway and providing that the cost be paid, \$6,500 by applicant, and the balance by Niagara, Welland & Lake Erie Ry.

25788. Jan. 5.—Approving G.T.R. plan of platform between tracks and station at Preston, Ont., and removal of switch stands.

25789. Jan. 8.—Ordering C.P.R. to provide automatic bell at crossing at Campbellville station, Ont.

25790. Jan. 8.—Authorizing G.T.R. to build two sidings for Roger Miller & Sons on the west side of Hanna Ave., Toronto.

25791. Jan. 8.—Ordering that Michigan Central Rd. crossing of third public highway west of Brookfield, Ont., be closed and traffic diverted over new roadway.

25792. Dec. 29, 1916.—Ordering Canadian Northern Quebec Ry. to establish non-agency station at St. Alexis, on its Rawdon Branch, and to close non-agency station, St. Alexis, on its Joliette & Hawkesbury line, traffic there to be taken care of at Rawdon Jct.

25793. Jan. 9.—Authorizing Hamilton St. Ry., G.T.R. and Hamilton Radial Ry. to operate over Kenilworth Ave, Barton Tp., Ont., without first stopping cars and trains.

25794. Jan. 9.—Authorizing G.T.R. to build branch line for Terminal Warehouse, Registered, St. Anns Ward, Montreal.

25795. Jan. 19.—Approving plans and specifications of work to be done under Michigan Central Rd. in connection with Kingsmill drain, Yarmouth Tp., Ont.

25796. Jan. 9.—Extending to Mar. 9, time within which C.P.R. may install bells authorized by order 25184, July 24, 1916, at Crawford's highway crossings, between Westfield and Hillandale, N.B.

25797. Jan. 10.—Approving agreement between Bell Telephone Co. and Hay Tp., Ont., Dec. 19, 1916.

25798. Jan. 11.—Dismissing application of Shingle Agency of British Columbia for authority to include with shipments of shingles requisite quantity of zinc clad nails, nails to be charged same rate as shingles.

25799. Jan. 12. Suspending order 25752, Dec. 22, 1916, which authorized Mathias Range Aqueduct Co. to lay water pipe under Canadian Northern Quebec Ry. at Chicoutimi, Que., pending disposition of action by C.N.Q.R. to restrain the construction.

25800. Jan. 12.—Amending order 25796, Jan. 9, re installation of electric bells at crossings between Westfield and Hillandale, N.B.

25801. Jan. 16.—Extending to May 31 time within which work under order 19087, Apr. 16, 1913, approving location of Lake Erie and Northern Ry. Lorne Bridge, Brantford, to Main St., Galt, Ont., may be completed.

25802. Jan. 17.—Extending to June 1, time within which Lake Erie and Northern Ry. may operate over interlocking plant at station 7-23, Brantford, Ont., where it crosses G.T.R.

25803. Jan. 17.—Authorizing Canton Bois municipality, Que., to change location of crossing and divert Ste. Anne's Rapids Route, highway about 80 ft. westerly, at mileage 36.81, Canadian Northern Ry. Garneau-Riviere a Pierre branch.

25804. Jan. 17.—Extending to June 1, time within which Lake Erie and Northern Ry. may operate over crossing of Toronto, Hamilton and Buffalo Ry., in Brantford, Ont., pending installation of interlocking plant.

25805. Jan. 12.—Ordering Canadian Northern Ry. to stop its morning train due at Ottawa at 7.30 and shown on new timetable to arrive at 7.45; and train leaving Ottawa at 1.10 p.m., on flag at Merivale, Ont., also to erect flag station and establish facilities for loading and unloading livestock and other carload freight there.

25806. Jan. 17.—Approving plans and specifications of covered drain to be built by Sandwich East Tp., under Essex Terminal Ry., in Ford City, Ont.

25807. Jan. 18.—Authorizing New York Central Rd. to build bridge 6-A, near Hawthorne station, Ont.

25808. Jan. 18.—Authorizing Canadian Northern Ry. to build spur for Gillespie Elevator and Flour Mill Co., St. Albert, Alta.

25809. Jan. 19.—Ordering C.P.R. to provide station at Kreuzberg, Man., by Oct. 1.

25810. Jan. 19.—Authorizing G.T.R. to rebuild bridge 289 over Nottawasaga River, Essa Tp., Ont.

25811. Jan. 19.—Authorizing C.P.R. to build spur for J. A. Gendron, Drummondville Parish, Que.

25812. Jan. 19.—Ordering Canadian Northern Ry. to appoint station agent at Arran, Sask., by Mar. 1.

25813. Jan. 20.—Authorizing Montreal Tunnel and Terminal Co. to build tunnel cross sections as

shown on standard plans on file with Board, also approving clearances through the tunnel.

25814. Jan. 23.—Authorizing G.T.R. to rebuild bridge 210 across Little East River, near Novar, Ont.

25815. Jan. 23.—Approving agreement between Bell Telephone Co. and Back Line Telephone Co., Dufferin County, Ont. Dec. 16, 1914.

25816. Jan. 22.—Relieving C.P.R. from providing further protection at crossing 150 yds., south of Spencerville station, Ont.

25817 to 25819. Jan. 23.—Approving Bell Telephone Co. agreement with Dereham Telephone Co. in Oxford and Elgin Counties, Ont., Jan. 5; Medonte Tp., Ont., Dec. 14, 1916; and Norfolk & Tillsonburg Telephone Co., Jan. 5.

25820. Jan. 22.—Relieving Canadian Northern Ry. from further protection of crossing near mileage 428, Battleford Subdivision, Sask.

### Grand Trunk Railway Watch Inspectors' Meeting.

On Jan. 1, 1916, a change was made in the supervision of time service matters on the G.T.R., H. Hulatt, Manager of Telegraphs, assuming jurisdiction over them, succeeding Prof. C. H. McLeod, resigned. Mr. Hulatt, who had previously been Superintendent of Time Service, G. T. Pacific Ry., issued revised time service regulations on the G.T.R., effective May 8, 1916, they conforming very largely to those he had previously put into effect on the G. T. Pacific. A feature of the system is that the onus of reporting men delinquent is taken off the shoulders of inspectors, and the compilation of all reports and records centralized in one office.

With a view to increasing the efficiency of this branch of the railway service, a meeting of G.T.R. official watch inspectors was held in Montreal, Jan. 18 and 19, which was attended, with but few exceptions, by all inspectors, some 70 being present. The meeting was very successful, and proved of interest and value to those attending. Mr. Hulatt, in opening the proceedings, emphasized the fact that his great aim was to secure a thoroughly efficient service, thereby ensuring greater protection to the company's employes and patrons, and that this could only be attained by the heartiest co-operation between the inspectors and himself, honest and fair treatment of the employes by the inspectors, and the importance of ensuring that only first class work be done in connection with the

cleaning and repairing of watches. He drew attention to the fact that in the official list of watches approved for service on the road, employes were given a selection of practically 100 different grades, made by standard well known manufacturers, and that neither he nor the G.T.R. was in any way interested as to what particular make of watch an inspector favored or pushed, provided it was one of the makes or grades scheduled in the official list, which complied in every respect with similar lists in force on all important roads in Canada and the United States. Numerous interesting subjects were discussed, among others, the matter of standard loaners, equitable prices to charge for cleaning and repairing watches, deduction order, etc. In connection with the preparing of reports, etc., W. E. Bell, chief clerk, and Miss Doyle, assistant in charge of Time Service Records Bureau, discussed with the inspectors the various forms and the proper preparation of same, with a view to securing the maximum accuracy.

The inspectors were the guests of the G.T.R. at luncheon on Jan. 18, when D. E. Galloway, Assistant to President, and C. R. Moore, Assistant to Vice President, in charge of Transportation, addressed the inspectors, stating that their work was appreciated by the management and had its hearty support.

At the close of the meeting, R. Hemsley of Montreal, one of the inspectors, presented to Miss Doyle, on behalf of the inspectors, a solid gold wrist watch, showing their appreciation for the preparation of reports, etc., and J. Striker, of Buffalo, thanked Mr. Hulatt for having called the convention, stating that it had established a personal relationship between the inspectors and the chief, which they all valued, and which would undoubtedly result in a very much more efficient service, and that as a mark of their appreciation they had forwarded to Mrs. Hulatt a bouquet of roses. Mr. Hulatt, in thanking those present for their kindness to Miss Doyle, and also for the compliment paid to Mrs. Hulatt, expressed the pleasure it had been to meet all the inspectors, and said that all being well, a similar meeting at some other point on the system would be held next year.

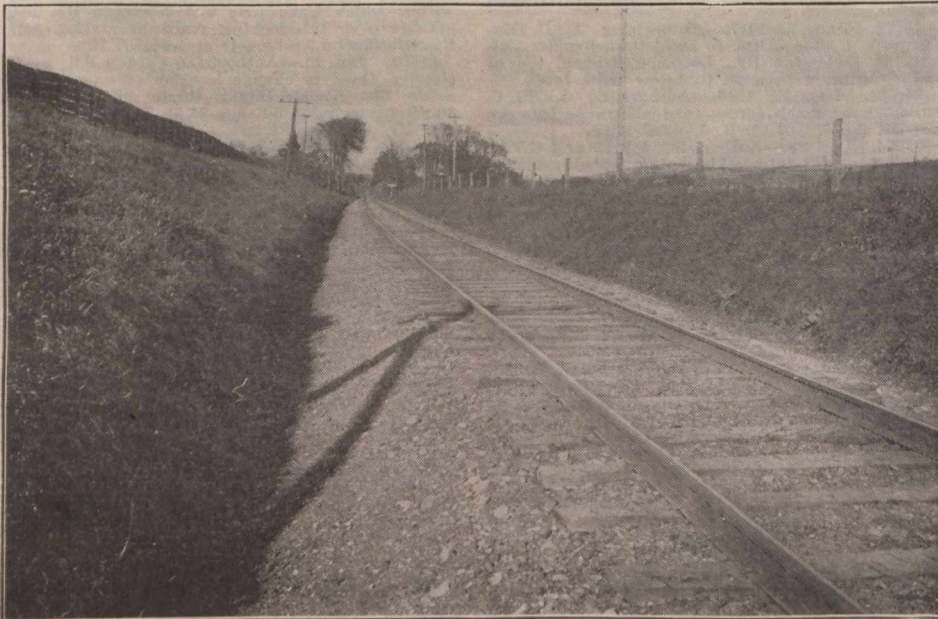
### Steam Railway Track Laid in 1916.

We have not been able to obtain any official information as to track laid on the three McArthur lines in Alberta. The total figures given in our January issue are amended below by omitting from the total the C.P.R. line to Camp Borden, Ont., 3.75 miles, and the G.T.R. line to Camp Borden, 4.21 miles, these lines being regarded as spur lines and not as permanent additions to mileage. We are officially advised that the estimate made of 2.75 miles of railway to the Intercolonial Ry.'s Halifax ocean terminals covered only construction track, it being proposed to lay permanent track during this year. There is also an alteration in the estimated figures given in the January table for the Alberta & Great Waterways Ry. It was expected when that table was prepared that track would reach McMurray by Dec. 31, but a statement by J. D. McArthur, President, reported recently, was that 80 miles of track still had to be laid before McMurray was reached. The table corrected as above stated follows:

	Miles.	Miles
<b>*Alberta &amp; Great Waterways Ry.—</b>		
Mileage 174.5 towards McMurray		
Alta . . . . .		40.00
<b>Canadian Northern Ry. System—</b>		
Canadian Northern Quebec Ry.,		
Arundel to Kaolin, Que. . . . .	9.00	
<b>Canadian Northern Pacific Ry.—</b>		
Victoria to Patricia Bay . . . . .	18.72	
Victoria towards Alberni . . . . .	1.00	
		14.72
		23.72
<b>Canadian Pacific Ry.—</b>		
Pakowi to Manyberries, Alta. . . . .	10.40	
Stony Creek to Cambie . . . . .	10.50	
		20.90
<b>*Central Canada Ry.—</b>		
Heart River to Peace River Land-		
ing, Alta., M. 47.60 to M. 49.60		1.90
<b>*Edmonton, Dunvegan &amp; B.C. Ry.—</b>		
M. 336.9 to Spirit River, M. 357 . .	20.10	
Spirit River to Grande Prairie Set-		
tlement, Alta. . . . .	48.50	
		68.60
<b>Grand Trunk Pacific Ry.—</b>		
Moose Jaw N.W. Branch M. 67 to		
70 . . . . .		3.00
Regina-Moose Jaw Branch to Ele-		
vator . . . . .		2.65
		5.65
<b>Hudson Bay Ry.—</b>		
Manitou Rapids, M. 241.24, to Kettle		
Rapids . . . . .		91.00
<b>Kettle Valley Ry.—</b>		
To connect track ends in Coqui-		
halla Valley, B.C. . . . .		1.70
<b>Pacific Great Eastern Ry.—</b>		
Clinton northerly towards Prince		
George, B.C. . . . .		15.17
<b>Prince Edward Island Car Ferry—</b>		
Connections at Port Borden, P.E.I.		1.00
<b>Quebec &amp; Lake St. John Ry.—</b>		
Lorette to Huron River, Que. . . .		10.00
<b>Toronto, Hamilton &amp; Buffalo Ry.—</b>		
Dunnville to Port Maitland, Ont. . .		5.00
<b>Vancouver, Victoria &amp; Eastern Ry. &amp; N. Co.—</b>		
Completion of Sumas Landing—		
Connor Line . . . . .	1.13	
Connection between Kettle Valley		
Lines and Canadian Northern Pa-		
cific Ry. at Hope, B.C. . . . .	0.17	
		1.30
Total . . . . .		285.94

Track was laid during the year in seven Provinces, Alberta showing the largest mileage. Following is a comparison of new mileage with 1915 and 1914:

	1916.	1915.	1914.
Alberta . . . . .	120.90	299.60	513.12
Manitoba . . . . .	91.00	57.91	300.15
British Columbia . . . . .	23.39	212.20	679.26
Quebec . . . . .	19.00	16.00	52.51
Saskatchewan . . . . .	5.65	107.12	215.97
Ontario . . . . .	5.00	1.00	200.01
Prince Edward Island . . . . .	1.00		2.50
Nova Scotia . . . . .		57.91	500.15
New Brunswick . . . . .		2.14	29.99
	285.94	753.88	2,493.66



On Section 8, Shogomoc Subdivision, New Brunswick District, Canadian Pacific Railway.

The foreman of this section, Allan King, was awarded the General Manager's prize, in the track section competition on Eastern Lines, C.P.R., full particulars of which were given in Canadian Railway and Marine World for January, pg. 2.

The Canadian Northern Patriotic Association has been organized by C.N.R. employes to assist the Patriotic Fund.



## Canadian Transportation Men, Engineer, Etc. in the War.

**Railway and Forestry Battalion.**—London, Eng., press dispatch, Jan. 7. "In connection with the combing out process now proceeding in the Canadian forces in England and at the base two labor battalions, two railway construction battalions and two forestry battalions have already been formed from men graded for permanent base duty."

**The Engineers' Importance.**—Capt. D. M. Mathieson, M.C., of the Canadian Engineers, who returned from France in December, in lecturing in Toronto recently, referred to the tremendous importance of the Canadian Engineers' work in that country. No work of importance, he said, could be carried on without their co-operation. So much responsibility, in fact, is placed on this branch of the service that an engineer subaltern in France is on a par with an infantry colonel, as far as power goes. The sappers are called upon to direct from 50 to 100 men and approximate to the position of a railway construction foreman in this country.

**Canadians to Build Military Railways.**—Ottawa press dispatch, Jan. 12. "Canada has been given complete charge of the whole of the allied railway construction on the western front. Lt. Col. J. W. Stewart, of Vancouver, is in command of this important work. In preparation for the spring offensive, Canadians are building hundreds of miles of road in France and Flanders. In connection with this work four new companies have been authorized in western Canada, one in each of the four western provinces. The Manitoba company will be commanded by Major Lanigan, son of W. B. Lanigan, Assistant Freight Manager, C.P.R., Winnipeg. The Saskatchewan company will be commanded by Major George Robinson, M.C. Capt. Geo. Gardiner and Capt. Fitzsimons will jointly raise the Alberta company, and the British Columbia company will be recruited by Major Marsh, contractor, New Westminster.

"The two new railway construction battalions recently authorized, 256th and 257th, will look after recruiting for eastern Canada. In addition, the 143rd Bantam Battalion of British Columbia and the 228th Overseas Battalion have been converted into railway construction corps, and will leave for overseas soon. It is understood also that a number of battalions have been created from the Canadian forces in England for this work. Altogether there probably will be 10,000 Canadians engaged soon on this important and vital operation."

**Canadian Government Railways Help.**—F. P. Gutelius, General Manager, issued the following circular, Jan. 15: "These railways are sending 300 miles of rails and 1,200 switches to the front to be used in the construction of a railway and the necessary terminals for the handling of supplies, munitions and men between the seaboard and the war zone. This railway is being built by and under the supervision of the Canadian Railway Construction Corps, and sufficient locomotives and cars are being sent from this side to equip same. The Army Council have asked for the assistance of the Dominion Government in manning this new military road in France, and the Canadian Government Railways are asked to supply 20 full crews, each crew to be composed of 1 engineer, 1 fireman, 1 conductor and 2 brakemen. In order that each superintendent's district may be represented I am asking the officers on each district to

arrange for the recruiting of 2 crews. These men, of course, will be volunteers between the ages of 21 and 45. They will enlist as soldiers and undergo a brief period of military training, with the understanding that their employment will be the railway work above outlined, and with the further understanding that they will receive wages made up of military pay equal to their present pay, determined on the basis of 100 miles or 10 hours for each day that they are in military service; also that their seniority, Provident Fund and Insurance Association standing on these railways be maintained during their leave of absence on this most important work in which the road employes on these railways can render so great assistance to the Empire, and who will, I hope, form a body of men of which all employes on these railways will be justly proud."

**127th Battalion.**—Lee. Corp. Shadwell, of the 127th Battalion (York Rangers), writing from Camp Bordon, Hampshire, England, to the Telegram, says the battalion has made a good name for itself while training, since arriving in England on Aug. 30 last. It is no longer an infantry battalion, but a light railway engineering battalion. On Oct. 11, some 250 men were drafted to No. 1 Construction Battalion, France, and some have since been killed or wounded. After several moves the 127th reached Camp Bordon, and is now equipped with everything for transport and construction work, including 200 mules, trucks, cars, wagons and railway tools, ready to go anywhere.

**143rd Railways Construction Battalion, C.E.F.**—The 143rd Overseas Battalion, C.E.F. (Bantams), with headquarters at Victoria, B.C., was converted into a railway construction battalion on Jan. 7. It is commanded by Lt. Col. A. B. Powley, and will have a strength of about 1,000, all ranks.

**The 228th Battalion**, which was raised as a forestry battalion, has been changed to a railway construction one. It will be composed of about 1,000 men of all ranks. Its headquarters for the present are at Toronto, the commanding officer being Lt. Col. A. Earchman, who has already seen service at the front, and who was formerly engaged in construction on the Hudson Bay Railway. Several of his officers are engineers, and the men have been largely recruited from the railway employes and mining men of the North Bay and Sudbury district and along the National Transcontinental Railway.

**The 239th Battalion Overseas Railway Construction Corps**, under command of Lt. Col. J. W. Stewart, of Foley, Welch & Stewart, railway contractors, Vancouver, was officially reported on Dec. 28 as having arrived safely in England.

**The 256th Railway Construction Battalion** will be composed of about 1,000 men of all ranks. The commanding officer is Lt. Col. Walter McConnell, 43 Indian Road, Toronto. Four companies will be raised in Halifax, N.S., Montreal, Toronto and St. Catharines, Ont. The Montreal company will be commanded by F. L. C. Bond, B.A.Sc., A.M.Can.Soc.C.E., Division Engineer, G.T.R., Montreal.

**The 257th Railway Construction Battalion, C.E.F.**, which will consist of about 1,150 officers and men, has its headquarters at 405 Wellington St., Ottawa, and is being raised by Lt. Col. T. L. Martin, of O'Brien & Martin, railway contractors, Renfrew, Ont. Among the other officers

are Major A. D. Watts, A.M.Can.Soc.C.E., Toronto; Major Leslie Thompson, railway contractor; Major C. F. Harrington, M.Can.Soc.C.E., Ottawa; Major Bob Heron, a Timiskaming lumberman, who has specialized in railway bridge building; and Adjutant W. G. Fellows, of the N.C.G.A., Quebec.

**No. 1 Section, Skilled Railway Employes**, is being organized to operate 300 miles of double track railway which is now completed in the northern part of France. A. H. Kendall, heretofore Master Mechanic, C.P.R., has been appointed Captain, and T. A. Ross has been appointed Captain, Paymaster and Acting Adjutant. The headquarters are at Guy St. Barracks, Montreal. The unit will be made up entirely of skilled railway employes. The staff will consist of: Captain, officer commanding; Captain, Paymaster; Adjutant; two lieutenants, one of which will have the qualification of a railway divisional superintendent, and the other the qualification of a divisional master mechanic. There are many applicants for the two lieutenantcies from most reliable railway officials, and the appointments will be posted later, as the greatest care must be exercised in the choice, as competence in railway operation being the qualification required. The non-commissioned officers will be appointed after mobilization in barracks, the promotions being awarded in accordance with efficiency. The unit is to be recruited from all the Canadian railways, and it is expected that as only the most efficient will be accepted, the unit should give a good account of itself. The immediate requirements are: 96 locomotive men, 96 locomotive firemen, 54 locomotive mechanics, 4 experienced yardmasters, 16 experienced blockmen and stationmasters. A special working pay will be given in addition to the regular military pay of from 60 cents to \$1 a day. Separation allowance will also be given to those entitled to it, the minimum being \$20 a month. As this is a non-combatant unit, it is an opportunity for those to serve who wish to be engaged at their own vocation with a limited amount of military training. The uniforms will be identical with those of the infantry regiments, and the military drill order will be modified to meet only the requirements and to keep the men in good physical condition. It is expected that after this section is recruited three additional sections will be recruited, so as to make a complete battalion.

**Capt. H. W. Palmer** will recruit a company in St. Catharines, Ont., for one of the new railway construction battalions.

**Lieut. A. J. Motyer**, B.A.Sc., who has been killed in action, was a Rhodes scholar, and was formerly with Canadian Westinghouse Co.

**Capt. T. A. Hiam**, formerly private secretary to Sir Donald Mann, Vice President, Canadian Northern Ry., is adjutant of the 198th Battalion (Bufs), which is now at Toronto, and has been warned for overseas service.

**Capt. the Hon. W. J. Shaughnessy**, only surviving son of Lord Shaughnessy, is Adjutant of the Duchess of Connaught's Own Irish Canadian Rangers of Montreal, now touring in Ireland, preparatory to going to France.

**Brevet Col. G. P. Murphy**, Canadian Army Service Corps, Vice President, Ottawa Transportation Co., Ottawa, Ont., who has a staff appointment in England,

has been created a Companion of the Order of St. Michael and St. George.

**Major and Brevet Lt. Col. Temporary Brigadier, D. S. MacInnes, D.S.O.,** Royal Engineers, who has been created a Companion of the Order of St. Michael and St. George, is a brother of W. R. MacInnes, Freight Traffic Manager, C.P.R.

**J. W. Kennedy,** chief clerk, Vice President's office, C.P.R., Montreal, has left for overseas service. He will be attached to the staff of Lt. Col. C. W. P. Ramsey, Canadian Overseas Railway Construction Corps, as lieutenant.

**Capt. R. F. Morkill,** Signal Engineer, G.T.R., Montreal, who is on leave of absence for military service and is commanding the 209th Field Company, 34th Division, Royal Engineers, has been promoted to Major for services in the field.

**Lieut. Guy Dunstan,** attached to the 11th Border Regiment, who had been missing since July, 1916, was officially reported, early in January, to have been killed in action. He was son of Kenneth Dunstan, Manager, Bell Telephone Co., Toronto.

**Lieut. H. A. Yates,** son of G. W. Yates, Secretary to the Minister of Railways, who has been with the Mechanical Transport at Camp Niagara and Camp Borden, and latterly at Exhibition Camp, Toronto, has transferred to the Royal Naval Air Service and gone overseas.

**Lt. Col. G. S. Cantlie,** formerly General Superintendent, Car Service, C.P.R., who was given leave of absence on Jan. 8, 1915, to accompany his regiment, the 5th Regiment, Royal Highlanders of Canada, overseas, and who has been made a member of the Distinguished Service Order, is at present in Montreal, having been wounded in the arm.

**Lt. Col. T. L. Martin,** who is raising the 257th Railway Construction Battalion, with headquarters at Ottawa, is a member of the firm of O'Brien & Martin, Renfrew, Ont. Starting as a rodmán on the Timiskaming & Northern Ontario Ry., he became Resident Engineer, and then went into contracting, his firm having had large contracts on the National Transcontinental Ry. and also on the Quebec & Saguenay Ry.

**Major G. A. E. Bury,** Deputy Assistant Quartermaster General of the Training Division, C.E.F., son of George Bury, Vice President, C.P.R., has transferred from Brighton to Witley Camp, Surrey, Eng.

A London, Eng., press dispatch of Dec. 29 says Major J. B. Harstone, D.S.O., general list; Lieut. J. G. Fordham, general list, and Major C. L. Hervey, Canadian Engineer, have reported for duty with the Canadian railway troops organization.

**Major A. D. Watts,** who is second in command of the 257th Railway Construction Battalion, now being raised, with headquarters in Ottawa, is an honor graduate of the Royal Military College, Kingston, Ont., and an Associate Member, Canadian Society of Civil Engineers. Among other engineering work, he was engaged on the Brantford & Hamilton Ry. construction, was with the Hydro Electric Power Commission of Ontario, and was also engaged on a number of power developments.

**Lieut. L. W. Klingner,** who has been given the Military Cross "for showing great courage when in charge of a working party under heavy fire," is a Torontonian, 29 years old, and a science graduate of Toronto University, 1907. He was for some time in the C.P.R. Construction Department, particularly in the Smiths Falls district. He received his commis-

sion in the Canadian Engineers in Jan., 1915, went overseas in Feb., 1916, and to France in July, 1916, with the 10th Field Company.

**Lt. Col. J. J. Creelman,** of the Field Artillery, Canadian Expeditionary Force, who has been made a member of the Distinguished Service Order, and also of the Russian Order of St. George, is a son of the late A. R. Creelman, K.C., at one time General Counsel, C.P.R., and a director of that company. He is a partner in the firm of Casgrain, Mitchell, Holt, McDougall, Creelman & Stairs, advocates, barristers, etc., Montreal. He is said to be the youngest artillery brigade commander in the service, being only 35.

**Sapper W. H. G. Firkins,** whose next of kin are at Worcester, Eng., and who was reported in the Jan. 22 casualty list from Ottawa as having been wounded, was one of the party of the 12th Field Company, Canadian Engineers, which went out on the night of Nov. 25, under Lieut. Bruce H. A. Burrows, of Toronto, to put up barbed wire at what the officer commanding subsequently wrote of as "a very important strategical point." On the way into the work Lieut. Burrows, who was going ahead of his men to reconnoitre, was killed by a high explosive shell, but none of the others was injured.

**G. P. MacLaren, A.M.Can.Soc.C.E.,** who has been transferred from No. 2 Construction Battalion to the 256th Railway Construction Battalion, with the rank of Major, was associated with railway construction work under Mackenzie, Mann & Co. in Nova Scotia, Quebec and Ontario for 17 years. On the completion of the Canadian Northern Ry. between Pembroke and Sudbury, Ont., he was appointed Division Engineer, Mackenzie, Mann & Co., North Bay, Ont., and from Sept., 1915, until the organization of No. 2 Construction Battalion recently, he was Division Engineer, Toronto District, C.N.R., Toronto. He was a captain in No. 2 Construction Battalion.

**Lieut. C. S. L. Hertzberg, A.M.Can.Soc.C.E.,** of James, Loudon & Hertzberg, engineers, Toronto, who is in the Canadian Engineers at the front, has been given the Military Cross, for digging trenches under heavy fire and establishing a strong point on an exposed flank. He is a son of A. L. Hertzberg, M.Can.Soc.C.E., Division Engineer, C.P.R., Toronto. His two brothers, Major H. F. H. Hertzberg, Jr. M.Can.Soc.C.E., and Lieut. O. P. Hertzberg, are also at the front. The former received a similar decoration about a year ago. The latter, who enlisted as a private, and was promoted to lieutenant, was wounded, and returned home on leave last summer, being transferred subsequently to another unit.

**Major W. G. Tyrrell,** of the Royal Engineers, son of Dr. J. D. Tyrrell, Toronto, has been mentioned in dispatches for gallantry during the engagement which completely routed the Turkish Third Division on its march towards the Suez Canal. After graduating at the Royal Military College, Kingston, Ont., he was appointed a second lieutenant in the Royal Engineers. He was subsequently loaned to Canada, and after five years service here, returned to England in 1913. When war broke out he went to France, and after spending some months there, was given a staff appointment in England, subsequently being sent to Egypt, where he built about 100 miles of railway at a rate of over a mile a day.

**Lieut. H. G. Pepall,** who has returned to Toronto, suffering from wounds, is a son of Geo. Pepall, Assistant Foreign

Freight Agent, G.T.R., and representative of the National Despatch-Great Eastern Line. He went overseas in June, 1915, with a draft from the 37th Regiment. After arriving in England, he was sent to the Military School at Hythe, and after passing the examinations there, was made Machine Gun Instructor of the Canadian Machine Gun School at Shorncliffe. He went to France in January, 1916, and was appointed Machine Gun Officer of the 15th Battalion, 48th Highlanders, which position he filled until June, 1916, when he was placed in charge of No. 4 Company and recommended for a captaincy. Unfortunately he was wounded by shrapnel before he was gazetted, the elbow of his left arm being shattered, as well as his left leg. His leg is improving, but his arm will be practically useless.

**Major C. T. Trotter,** officer commanding 12th Field Company, Canadian Engineers, now forming part of the 4th Canadian Division in France, who has been mentioned in dispatches recently by Field Marshal Sir Douglas Haig, graduated at the Royal Military College, Kingston, in 1907, with honors, and after a two years science course at McGill University, Montreal, graduated there with the degree of B.A.Sc. He was then appointed Electrical Engineer, Militia Department, Ottawa, where he joined the 4th Company, Canadian Engineers, as a lieutenant. In 1912 he was employed by Standard Clay Products, Ltd., of St. Johns, Que., of which his father, W. C. Trotter, Major (reserve of officers), Canadian Artillery, is President and General Manager, to design a sewer pipe factory for the company at New Glasgow, N.S. On the outbreak of war he volunteered and was sent to Halifax, N.S., where, as a lieutenant, he constructed some defence works. In Nov., 1914, he was appointed Captain, 4th Field Company, Canadian Engineers, and went to England in April, 1915, and to Flanders in Sept., 1915, with the 2nd Canadian Division. He was on the Ypres salient until July, 1916, when he was appointed a Major and given command of the 12th Field Company, Canadian Engineers, 4th Canadian Division, proceeding with them to Belgium in Aug., 1916, and afterwards being transferred with them to France. Bruce H. A. Burrows, of Toronto, who was killed in action, Nov. 25, was a lieutenant in this company. Major C. T. Trotter's brother, Major Harold L. Trotter, is in command of the 11th Field Company, Canadian Engineers, 4th Canadian Division.

**Manitoba's Railway Report.**—The railway report presented to the Manitoba Legislature, Jan. 16, by the Premier showed that the total mileage of railways in the province at Dec. 31, 1916, was 4,672.52. During 1916 the government paid to the Canadian Northern Ry., out of the proceeds in the hands of the Provincial Treasurer of certain stock issues guaranteed by the province, \$183,430 on account of the completion of the line from Grand Marais to Victoria Beach, 14.11 miles. The report also stated that interest on all the C.N.R. debenture and stock issue securities was met by the company, the province not being called upon to liquidate any portion of the guarantee C.N.R. stock and bonds for \$25,502,873.33 are guaranteed by the province.

**The Brotherhood of Railroad Trainmen,** Western Lines, C.P.R., elected its officers, Jan. 12, for the next biennial period, as follows: Chairman, E. H. Cooke, Moose Jaw, Sask.; Vice Chairman, W. G. Baker, Moose Jaw; Secretary, Jas. McLaughlin, Calgary, Alta.

## Canadian Northern Railway Officials' Tribute to William Phillips.

On the eve of leaving the C.N.R.'s service recently, to enter that of the Cunard Steamship Co., William Phillips, Freight Traffic Manager, Eastern Lines, C.N.R., was entertained at dinner at the Albany Club, Toronto, by a number of the company's other prominent officials, the function being a spontaneous and enthusiastic tribute to his colleagues' esteem of him.

D. B. Hanna, Third Vice President, who presided, presented Mr. Phillips, on behalf of his associates, with a splendid cabinet of silver and paid a striking tribute to his many fine qualities, and to the splendid service he had given to the C. N. R. He traced in a most interesting manner the remarkable expansion of the system in the past 20 years, dwelling upon the various epoch marking events in its history and the evolution of the present system of over 8,000 miles. Mr. Phillips, in replying, expressed his deep regret at leaving the company, and the officials with whom he had worked for so many years.

W. H. Moore, Secretary of the Company, spoke of the high esteem in which Mr. Phillips is held by all the officers, and said that it was the earnest hope of every one present that the time would come when he would be again connected with the company.

F. H. Phippen, K.C., Chief Counsel of the company, alluded to the advantageous alliance that had been consummated between the C.N.R. and the Cunard Co. as the result of negotiations carried on by Mr. Phillips in England, and said it was a splendid tribute to Mr. Phillips' integrity and ability that the Cunard directors had sought his services to represent them in Canada, and that it was a good augury for the relations between the two companies.

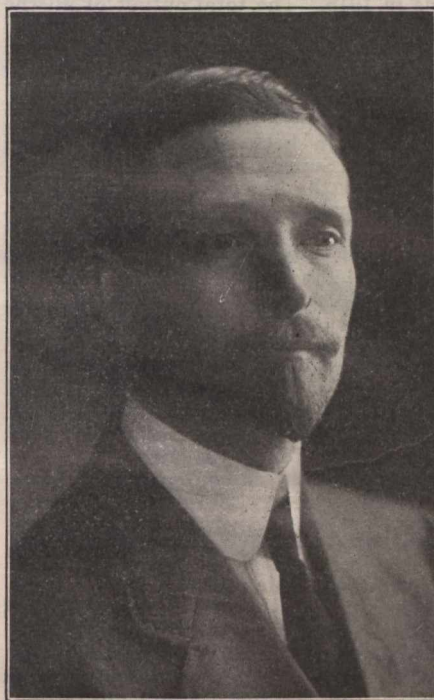
Among other speakers were G. H. Shaw, General Traffic Manager, C. Price Green, Scott Griffin and Noel Marshall.

Mr. Hanna's health was proposed by Mr. Moore, who alluded with feeling to the remarkable loyalty and affection felt by all the officers for the veteran Third Vice President, who had so successfully directed the company's destinies and operations since its inception, and expressed the hope that he would live for many years to enjoy the well-earned fruits of his labors.

The committee in charge of the arrangements for the dinner were: R. C. Vaughan, Assistant to Third Vice President; L. W. Mitchell, Treasurer and Purchasing Agent; E. W. Oliver, Assistant Engineer; and T. J. McCabe, Registrar and Transfer Agent. F. J. Buller, Paymaster, contributed to the musical programme.

Wm. Phillips was born in Toronto Jan. 31, 1870, and entered transportation service Apr., 1886, since when he has been, to Mar. 31, 1896, in G.T.R. offices, Toronto; Apr. 1, 1896, to Feb. 28, 1902, Northwest Agent, Northwest Transportation Co., Winnipeg; for a portion of this time he was also General Agent, Chicago Great Western Ry., and from Apr. 1, 1900, also Northwest Agent, Northern Navigation Co.; Mar. 1, 1902, to May, 1911, General Eastern Agent, C.N.R., Toronto; in Nov., 1906, he was also appointed General Freight and Passenger Agent, Canadian Northern Ontario Ry., and in Apr., 1910, also acting Traffic Manager, Canadian Northern Steamships, Ltd., and in Apr., 1911, this last position was

changed to General Freight and Passenger Agent, Canadian Northern Steamships, Ltd.; May, 1911, to May, 1912, he was General Freight Agent, Canadian Northern Ontario Ry., Central Ontario Ry., Bay of Quinte Ry., Irondale, Bancroft & Ottawa Ry., and Niagara, St. Catharines & Toronto Ry. and Navigation Cos., and also General Freight and Passenger Agent, Canadian Northern Steamships, Ltd.; May, 1912, to Nov., 1914; European Traffic Manager, C.N.R., London, Eng., Nov., 1914, to Sept., 1916, when the Canadian Northern Steamships, Ltd. was absorbed by the Cunard Steamship



William Phillips  
Formerly Freight Traffic Manager, Eastern Lines,  
Canadian Northern Railway, now Canadian  
Representative, Cunard Steamship Co.

Co., European Railway and Steamship Manager, C.N.R., and Canadian Northern Steamships, Ltd.; Dec. 1 to Dec. 31, 1916, Freight Traffic Manager, lines east of Port Arthur, C.N.R., Toronto.

Canadian Society of Civil Engineers, Saskatchewan Branch.—It has been felt for some time by members of the society in Saskatchewan that a closer co-operation is necessary, also a centre for the members of easier access to them than the headquarters of the society at Montreal. With the unanimous consent of all members in the province, it is suggested to extend the scope of the Regina Branch to include all members of the engineering profession in Saskatchewan and change the name to Saskatchewan Branch. An organization meeting at Regina recently elected L. A. Thornton as chairman and J. N. deStein as secretary, and L. A. Thornton and H. S. Carpenter, of Regina; G. D. Mackie, Moose Jaw; C. J. Yorath, Saskatoon, and R. W. Ross, Melville, were elected a nominating and organizing committee. They will convene in the very near future, when the organization and the outlines of the general policy of the branch will be decided upon, after sanction of the society's council in Montreal has been obtained.

## The Death of Thomas Malcolm.

Thos. Malcolm, of Campbellton, N.B., who died at his brother in law's house at Bathurst, N.B., Jan. 10, was well known as a railway contractor, etc., throughout Canada. He was born in Campbellton in 1854, and during the construction of the Intercolonial Ry. through that district, he joined the construction crew as water boy, working up to time-keeper. When that section was completed he joined the engineering staff, under the late W. D. Barclay, and acted as chain man, working practically all along the line from Halifax to Riviere du Loup. Then he went to the Black Hills, Nevada, and engaged in mining contracting. From there he went to Winnipeg, where he met the late Duncan Ross and formed the Malcolm and Ross partnership. They got a subcontract for timber construction on the C.P.R., and on completing it took a subcontract for bridge work on section B, Canadian Pacific Ry. from Manning Macdonald & Co., who had a contract from the Dominion Government for building the section between Hawk Lake and Rat Portage, Ont. On the completion of this work, Malcolm & Ross removed to Ottawa, and later took a contract for railway construction in the Muskoka district of Ontario, and afterwards did some city work in Ottawa. Subsequently they visited Panama, with the intention of taking a contract but decided not to do so.

Their next work was building between 75 and 100 miles of the Temiscouata Ry., and after that they built some sections of the Bangor & Aroostook Rd. in Maine. While engaged in the latter work they conceived the idea of building a line across northern New Brunswick, from Campbellton to St. Leonard, with a bridge across the St. John River to Van Buren, Me., to connect with the Bangor & Aroostook Rd., and secured a charter for the Restigouche & Western Ry. Co. Mr. Ross died soon afterwards, but Mr. Malcolm went on with the construction, and after surmounting many difficulties he succeeded, in 1910, in completing the line, the name of which had in the meantime been changed to International Ry. of New Brunswick. Since July 31, 1914, it has been operated as an Intercolonial Ry. branch, the Dominion Government paying rental based on interest on an agreed price at which it may be taken over within the next three years.

Mr. Malcolm was a remarkably rugged man and enjoyed excellent health until some two years ago. In Dec., 1915, he underwent a serious operation in New York and never recovered his health. He was able to be up for about two months last summer but had practically been confined to bed since September last. He married Miss Babin, of Edmundston, N.B., who survives him, as also do their daughter, Mrs. Roland Moffatt and three sons, two of whom are lieutenants in the C.E.F., one being overseas and the other at home from the front on sick leave. The attendance at the funeral testified to the deep affection in which Mr. Malcolm was held. A large number of Campbellton citizens went to Bathurst by special train and returned by it with the body to Campbellton, where the burial took place.

The C.P.R. has removed its Liverpool Eng., offices from the Royal Liver Building to 6 Water St., the offices hitherto occupied being transferred by Canadian Pacific Ocean Services, Ltd.

The Western Canada Railway Club, with headquarters at Winnipeg, has ceased to exist.

### Freight and Passenger Traffic Notes.

The C.P.R. is operating its transcontinental traffic through the Connaught tunnel at Rogers Pass, B.C., instead of via Glacier, as formerly.

It is expected that the freight congestion on the railways will be so relieved that the normal passenger traffic will be restored after May 1.

The G. T. Pacific Coast Steamship Co.'s s.s. Prince Rupert, during 1916 on the Skagway run, travelled 50,418 miles and carried 8,600 passengers.

The C.P.R. opened an up-town ticket office in the Hotel Vancouver, Vancouver, Jan. 2, W. S. Stewart, formerly of Victoria, being placed in charge.

J. P. Mader, General Freight and Passenger Agent, Algoma Eastern Ry., has been authorized to prepare and issue tariffs for all the company's traffic on its railways and in its vessels.

A deputation from Quebec waited on Lord Shaughnessy at Montreal, Jan. 10, asking that the Chateau Frontenac be enlarged, claiming that the present accommodation is inadequate. Consideration was promised.

A Quebec Superior Court gave a verdict, Jan. 9, for \$107.75 in favor of H. McAvoy against the G.T.R. for the loss of a travelling bag and contents which had been checked in the company's parcel office, Montreal.

The C.P.R. is providing through its dining car department a train basket lunch service, which is operated in connection with its dining cars, and enables passengers who do not desire a regular meal to obtain a light one with tea or coffee.

The Moncton & Buctouche Ry.'s Standard Freight Mileage Tariff C.R.C. no. 23 has been approved by the Board of Railway Commissioners, subject to the condition that the 5th class rate for the 11-15 mile group be reduced from 7 to 6c per 100 lb.

Certain interests in Hamilton, Ont., are agitating in favor of an application being made to the Board of Railway Commissioners for an order directing that the C.P.R. and the G.T.R. make their tickets between Toronto and Hamilton interchangeable. The proposal, however, does not meet with the Hamilton Board of Trade's approval.

The G.T.R. has issued for its agents adhesive tags which are being placed on all letters sent to shippers of freight. They have printed on them: "Important! Business requires all concerned to keep cars moving. Help us to help you. Kindly load or unload cars immediately regardless of free time limit. This will help our car supply and help you. Let's help each other."

The Northern Pacific Ry. has issued a circular to shippers in Vancouver, B.C., to the effect that cars will be withheld from firms which do not load them to capacity. The N.P.R. says that with the co-operation of shippers in regard to the full loading of cars it would be possible for it to show an increase of 10% in one month in the average loading of cars now employed.

The Canadian Northern Pacific Ry. is making use of its car barges, operated on the Fraser River and adjacent waters, for the collection and distribution of freight at any point where traffic may be found. It is reported that a considerable business is being developed, and that it can be economically conducted. Factories having water front facilities are thereby given connection with the Canadian

Northern lines although they may be miles away.

A joint circular has been issued by transportation lines in Eastern Canada directing railway and steamship agents to carefully observe the regulations as to the issue of half fare tickets for children, between 5 and 12 years of age, and instructing conductors and pursers to collect half fares for children apparently over years for whom no tickets are presented, and full fares for children apparently over 12 for whom half fare tickets are presented.

The Canadian Northern Ry. during 1916 carried 189,427 tons of coal from the Northern Alberta coal fields against 111,236 tons in 1915, and about 200,000 tons from the Drumheller collieries in Southern Alberta, against less than 100,000 tons in 1915. The total output of all the Alberta coal fields for 1916 was reported at Ottawa to be 4,400,000 tons, of which the fields tributary to Edmonton produced 904,493 tons, and the Brazeau and Jasper Park collieries 223,678 tons.

Navigation between Point du Chene, N.B., and Summerside, P.E.I., was suspended for the season, Dec. 30, in consequence of which a new train schedule was put in operation on the Intercolonial Ry.'s Point du Chene branch, Jan. 1. Trains leave Moncton at 10.25 a.m., 6.15 and 10 p.m., and Point du Chene, 5.55 and 7.35 a.m., 1.05 and 3.30 p.m. Commencing Jan. 11, all railway traffic for Prince Edward Island was diverted to Pictou, N.S., to be transferred to Georgetown by steamship leaving Mondays, Wednesdays, and Fridays at 7 a.m., and returning from Georgetown, Tuesdays, Thursdays and Saturdays at the same hour.

### Railway Finance, Meetings, Etc.

**Boston and Maine Rd.**—A U. S. Federal Court, sitting at Boston, Mass., Jan. 6, after a hearing extending several weeks, dismissed the minority stockholders suit subject to the final determination of a point of law, against the appointment of a receiver for the company.

A Boston, Mass., dispatch, Jan. 8, says: A bill to repeal the Legislative Act of 1915, authorizing the reorganization of the Boston & Maine Rd. has been filed by Representative Frost, of Somerville, who announced that later he would present a bill to authorize the State to purchase the majority holding of B. & M. Rd. common stock, owned by the New York, New Haven & Hartford Rd., but now administered by Federal trustees."

**Canadian Northern Ry.**—There has been deposited with the Secretary of State at Ottawa duplicate of trust agreement, dated Jan. 10, between the company and the Central Trust Co., New York, as trustee, securing an issue of 6% gold notes.

**Diamond Coal Co.**—A meeting of the debenture holders will be held in Calgary, Alta., Feb. 5, to consider and ratify an option given by the liquidator on the company's property and assets or otherwise to arrange for the disposal of the property. The company owns a 6 mile railway from its collieries at Diamond City to a junction with the C.P.R. at Kipp, which was built in 1909, and to which was added some mileage of sidings in 1912-13.

**Timiskaming and Northern Ontario Ry.**—Passenger earnings, Nov., 1916, \$55,039.83, against \$46,142.17 for Nov., 1915. Freight earnings, Nov., 1916, \$105,798.07, against \$99,897.65 for Nov., 1915.

**White Pass & Yukon Route.**—Gross earnings from Jan. 1 to Nov. 14, 1916, \$1,825,302, against \$1,454,989 for same period, 1915.

### Reduction of Passenger Train Service to Relieve Freight Congestion.

To carry into effect the Board of Railway Commissioners' order, which appears on pg. 48 of this issue, the principal railways made sweeping temporary reductions in their passenger train service east of the Detroit and St. Clair Rivers and Lake Superior on Jan. 14, as follows:

The C.P.R. cancelled 60 trains on its Eastern lines, viz: Farnham Division, 7; Laurentian Division, 7; Ottawa and Smiths Falls Divisions, 15; Smiths Falls and Sudbury Divisions, 2; Bruce and Sudbury Divisions, 2; Smiths Falls and Trenton Divisions, 8; Toronto, Hamilton and Buffalo service, 9; London Division, 10. On the Smiths Falls and Trenton Divisions 2 new trains have been put on, making a net reduction of 58.

The G.T.R. cancelled 61 trains, viz.: Portland-Montreal, 6; Levis-Richmond, 2; Montreal-Toronto, 4; Ottawa-Pembroke-Madawaska, 2; Montreal-Ottawa, 2; Co-teau Junction-Valleyfield-Swanton, 2; Toronto-Hamilton-Suspension Bridge-London, 10; London-Port Huron, 1; London-Windsor-Detroit, 2; Hamilton-Jarvis-Port Dover-Port Rowan-St. Thomas, 2; Stratford-Port Huron, 6; Stratford-Goderich, 2; Hamilton-Harrisburg-Guelph-Palmerston, 5; Palmerston-Durham, 1; Stratford-Port Dover, 2; London-Wingham, 2; Hamilton-Allandale, 2; Toronto-North Bay, 2; Allandale-Meaford, 2; Allandale-Midland-Penetang, 4.

The Canadian Northern cancelled 29 trains on its Eastern Lines, viz.: La Tuque Subdivision, 2; Batiscan & Chicoutimi, 6; Montford Subdivision, 2; Joliette Subdivision, 6; Laurentian Subdivision, 2; Hawkesbury Subdivision, 2; Brockville Subdivision, 2; Picton Subdivision, 1; Maynooth Subdivision, 2; Muskoka Division, 2; Orillia Subdivision, 2. The two trains cancelled on Orillia Subdivision leave it without any passenger service.

The Intercolonial, while not under the Board of Railway Commissioners' jurisdiction, has also made considerable reductions. The two daily through trains each way between Halifax and Montreal, the Ocean Limited and Maritime Express, are being continued but the running times have been lengthened, so as to enable them to handle more local business. On Jan. 25, 14 trains were cancelled, viz.: Halifax and Truro, 2; Point Du Chene and Moncton, 2; St. John and Moncton, 2; Newcastle and Campbellton, 2; Campbellton and Levis, 2; St. Leonard Jct. and Montreal, 2; Levis and Montreal, 2. It is said that this will make a total saving of approximately 20,000 miles a month, or 19% of the present I.R.C. traffic.

**Car Shortage Situation in United States.**—Washington, D.C., press dispatch, Jan. 20: "Drastic regulations designed to relieve the shortage in coal cars and help bring about a lowering of present high prices of coal were prescribed today by the Interstate Commerce Commission. The regulations require return to original ownership of all coal cars as fast as unloaded, and give the railways 10 days to devise methods for relieving the shortage in other types of cars. The commission's order also requires the railways to apply the same regulations to refrigerator, heated, ventilated and insulated cars."

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## Canadian Government Railways' Coal Supply.

An order in council was passed at Ottawa, Jan. 14, authorizing the Canadian Government Railways to expend \$300,000 additional on coal. This has been made necessary owing to the increased traffic on the Intercolonial and the decreased output from the Nova Scotia and New Brunswick mines, from which the railway's coal is usually obtained. The regular storage piles at the railway depots have been depleted to the extent of 14,500 tons, and 150 cars of commercial coal have been requisitioned to make up the shortage. The contracts for coal with the Canadian colliery owners amounted to about 1,000,000 tons, the prices running from \$3.40 to \$3.65 a ton. The government advised the mine owners that it was prepared to meet them in the way of an increased price if the output would be augmented, but with it all the railway management was faced with an apparent shortage in the coal supply of about 50,000 tons up to Mar. 31. The management decided that it would not be right to confiscate any further coal in transit for commercial purposes, and that in order to provide the necessary fuel for the locomotives coal would be purchased in the U.S. It is anticipated that this coal will cost about \$10 a ton delivered.

## Grain Inspection at Western Points.

The following figures compiled by the Trade and Commerce Department show the number of cars of grain inspected on railways at Winnipeg and other points on the Western Division, for Dec., 1916, and for the four months ended Dec. 31, compared with those inspected for the four months ended Dec. 31, 1915:

	Dec. 1916.	4 months to Dec. 31, 1916.	4 months to Dec. 31, 1915.
C.P.R. ....	16,153	64,342	103,210
C.P.R., Calgary . .	828	2,536	2,238
C.N.R. ....	7,731	31,695	50,830
G.N.R. ....	77	615	2,576
G.T.P.R. ....	3,783	12,955	25,819
Totals .....	28,572	112,143	184,673

## George Bury's Movements.

George Bury, Vice President, C.P.R., who, as stated in Canadian Railway and Marine World for January, arrived in Liverpool, Eng., Dec. 21, went from there to London, where he was met by his son, Major G. A. E. Bury, Deputy Assistant Quartermaster General of the Training Division, C.E.F. He went over to France for a few days, visited the Somme front and reached St. John, N.B., on the s.s. Scandinavian, Jan. 13, and Montreal, Jan. 15. He was accompanied to England by Mrs. and Miss Bury, who returned with him. On Jan. 17, he inspected the C.P.R. Montreal-Toronto line from Montreal to Smiths Falls, and left Montreal again on Jan. 23 for New York, en route to England on business.

An Ottawa press dispatch of Jan. 29 said that Mr. Bury had "been appointed to go to Russia and take charge of the entire railway system supplying the Czar's troops with food and munitions."

A Montreal press dispatch of the same date said that C.P.R. officials there stated that Mr. Bury had gone to England on the company's shipping business.

Lord Shaughnessy issued the following statement in Montreal, Jan. 30: "As the C.P.R. is handling large quantities of Russian freight via Vancouver and Vladivostok, it was thought desirable that an

official of the company should visit Russia with a view to acquiring such geographical and other information as might be of service in dealing with transportation problems, and Vice President Bury decided to go himself."

## The Rogers Pass Tunnel Suit.

Judgment was given at Vancouver, B.C., June 30, 1916, fixing the damages to be paid to McIlwee & Sons, Denver, Col., in the action brought by them against Foley, Welch & Stewart for breach of contract in connection with the boring of the Rogers Pass tunnel on the C.P.R. The amount of damages awarded was \$576,155.98. On July 12 the defendants were granted leave to appeal against the amount of the damages on condition that \$600,000 be deposited in court to cover damages and costs. An accepted cheque was afterwards paid into court. The plaintiffs, however, were not satisfied with this, and initiated proceedings garnishing the C.P.R. in order to attach funds due on account of the tunnel construction and payable to Foley, Welch & Stewart. This firm secured a decision in the British Columbia Supreme Court setting aside the garnishee order, and the matter was taken to the Court of Appeal by McIlwee & Sons. On Jan. 4, the latter court, with one judge dissenting, reversed the Supreme Court's decision and upholding the garnishee. Pending the hearing of the appeal against the amount of damages, McIlwee & Sons are secured by the deposit in court of the accepted cheque for \$600,000 and the garnishee order preventing the C.P.R. paying out money in its hands due to Foley, Welch & Stewart on account of the tunnel construction.

**Sir William Van Horne's Will.**—Sir Wm. Van Horne, K.C.M.G., who died in Montreal Sept. 11, 1915, left the following specific bequests: To his widow, Lady Van Horne, his house on Sherbrooke St. West, Montreal, with his very valuable art collection and an annuity of \$30,000 a year. To his daughter, Miss Adeline Van Horne, his summer house and estate, Covenhoven, St. Andrews, N.B. To his grandson, W. C. T. Van Horne, \$200,000, which is placed with the Royal Trust Co. until the boy becomes 21 years of age. The residue of the estate is left, one third each, to Lady Van Horne, Miss Van Horne, and his son, R. B. Van Horne. The will was probated in Winnipeg recently, the Winnipeg estate including 3,000 shares Winnipeg Electric Ry., valued at \$350,000, and 3,955 acres of farm land at East Selkirk, valued at \$98,893.50, the buildings being valued at \$20,000 and the live stock at \$25,015.

**Canadian Society of Civil Engineers.**—At the concluding of the society's annual meetings at Montreal, Jan. 24, the following officers were declared elected for the current year: President, J. S. Dennis, Montreal; Vice Presidents, J. M. R. Fairbairn and C. N. Monsarratt, Montreal; other members of the council, A. R. Decary, Quebec; J. H. Kennedy, Vancouver; H. Longley, St. John; G. A. McCarthy, Toronto; W. Pearce, Calgary; R. A. Ross and J. C. Smith, Montreal; and Jas. White, Ottawa.

**Railway Enquiry Commission.**—The Prime Minister stated in the House of Commons, Jan. 23, that the report of the commission, of which A. H. Smith, President, New York Central Rd., is Chairman, would not be ready for some weeks, possibly not before March.

## Railway Rolling Stock Notes.

The Italian Government is reported to be enquiring for prices for 4,000 freight cars for the state railways.

The C.P.R. has received 399 box cars from its Angus shops, making a total of 870 of this type recently received.

The Canadian Northern Ry. has received 600 box cars, nos. 30300 to 31498, from Haskell & Barker Car. Co.

The Algoma Eastern Ry. is reported to be contemplating the purchase of a number of steel hopper or gondola cars.

Canadian Government Railways have ordered 50 wood flat cars, to be built at the Moncton shops, N.B., and have pur-

chased two 100 ton wrecking cranes from F. H. Hopkins & Co.

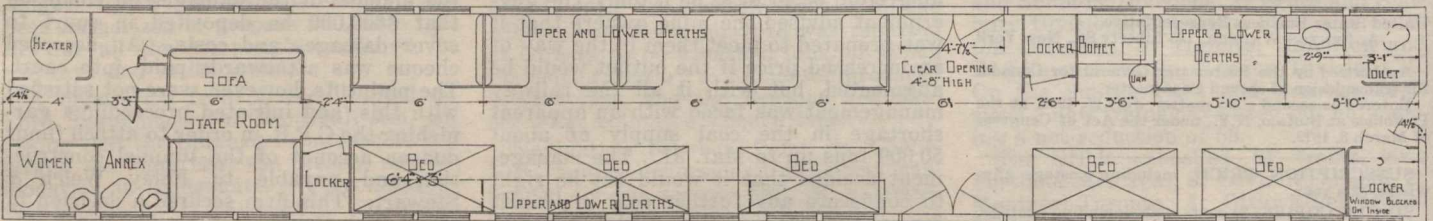
in the Electric Railway Department on another page.

It is stated by a U.S. paper that the Russian Government is negotiating with Canadian car builders for a considerable number of "so called pood cars." To clear up this mystery in designation, we may say that a pood is the Russian standard of weight, equivalent to about 36 lbs. It is possible that in the transmission of the item, some figures stating the number of poods, thus indicating the capacity of the cars, have been omitted.

The Imperial Munitions Board, Ottawa, has ordered for the British Government, 17,000 chilled tread cast iron double plate

son, N.J., and Dunkirk, N.Y. works.

Canadian Government Railways have converted 10 sleeping cars into hospital cars for the transportation of wounded and invalid soldiers from the seaboard to their destinations. Five of these cars have been provided with wide side doors, and the door at one end widened, and the other five have been arranged with widened end doors only. Those with the side doors are numbered even numbers from 3800 to 3808, and those with the end entrances only, the odd numbers from 3801 to 3809. The cars with the side doors are equipped with 8 standard hospital beds, and those with the end doors have 13 beds. The cars will be operated in pairs, or one side door car to at least two or three of the others. The drawing rooms



Hospital Car, Canadian Government Railways.

chased two 100 ton wrecking cranes from F. H. Hopkins & Co.

The French Government is reported to be enquiring for prices on about 20,000 freight cars, and to have placed an order with Eastern Car Co. for 3,000 of this lot.

The British Government is reported to have ordered 125 freight locomotives at an approximate cost of \$2,750,000, to be delivered during 1917, from Baldwin Locomotive Works.

The French Government is reported to have ordered 100 consolidation locomotives from American Locomotive Co. for the government railways, for delivery in Jan. and Feb., 1918.

Canadian Government Railways, between Dec. 15 and Jan. 15, received 9 mikado locomotives from Canadian Locomotive Co.; and 30 steel frame box cars, 50 tons capacity, from Canadian Car & Foundry Co.

The French Government is reported to be making enquiries for prices for building of about 20,000 freight cars, and it is stated to be probable that some large orders will be placed in Canada and the U. S. shortly.

The C.P.R. has ordered 65 steel under-frame box cars, 40 tons capacity, making a total of 310 now on order; 1 automobile furniture car, 40 tons capacity; 1 freight refrigerator car, 30 tons capacity, and 1 stores supply car, to be built at its Angus shops.

The C.P.R. is contemplating adding a number of Pacific type locomotives to its rolling stock, for which plans, etc., are being tentatively prepared, and the Engineering Department is working on the question of bridge stresses in connection therewith.

The British Government has ordered through the Imperial Munitions Board, from the Canadian Locomotive Co., 40 consolidation locomotives. They are for the use of the Ministry of Munitions, and will be used in the transport of men and munitions to the seat of war.

The fire at the Preston Car & Coach Co.'s works, Preston, Ont., recently, destroyed 3 sleeping cars under construction for Canadian Government Railways, and 1 gas electric car, as well as several electric railway cars which are mentioned

and all but one lower berth have been removed, and the beds placed longitudinally on each side, with 18 ins. between each bed, and sufficient aisle space for the passage of military stretchers. The bed accommodation is, 1 lower and 13 upper berths and 13 beds, in five of the cars; and 1 lower, 11 upper berths and beds, not including the stateroom, in the other five cars. The illustration on this page shows the layout of one lot of the cars.

We are advised that while the rotary snow plough and 10 Sante Fe (2-10-2) locomotives, mentioned in our last issue, were ordered from the Montreal Locomotive Works, they were, owing to the exigencies of the occasion, built by the American Locomotive Co., at its Patter-

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

Week ending Jan. 12, 1917	Wheat. Bushels.	Oats. Bushels.	Barley. Bushels.	Flax. Bushels.	Totals. Bushels.
Port William—					
C.P.R. . . . .	3,218,612	1,509,478	167,954	.....	4,896,044
Consolidated Elevator Co. . . . .	997,983	397,213	30,249	151,998	1,577,443
Empire Elevator Co. . . . .	872,654	341,623	39,586	249,453	1,503,316
Ogilvie Flour Mills Co. . . . .	1,247,660	154,131	30,448	.....	1,432,239
Western Terminal Elevator Co. . . . .	746,561	308,897	32,289	341,195	1,428,882
G. T. Pacific . . . . .	2,880,752	2,076,974	113,443	81,314	5,152,483
Grain Growers' Grain Co. . . . .	1,213,703	872,291	81,313	.....	2,167,307
Port William Elevator Co. . . . .	793,211	577,694	28,426	63,306	1,462,637
Eastern Terminal Elevator Co. . . . .	1,072,539	685,433	19,063	.....	1,776,568
Thunder Bay Elevator . . . . .	672,539	491,934	73,515	65,102	1,303,090
Port Arthur—					
Port Arthur Elevator Co. . . . .	4,056,416	2,341,729	376,339	146,612	6,921,096
D. Horn & Co. . . . .	248,101	131,816	41,898	123,694	545,509
Dominion Government Elevator . . . . .	1,912,502	761,508	88,402	147,248	2,909,660
Grain afloat . . . . .	89,245	101,351	.....	.....	190,596
Total terminal elevators . . . . .	20,022,011	10,752,072	1,122,925	1,369,862	33,266,870
Calgary Dom. Govt. Elev. . . . .	986,194	264,420	11,284	26,846	1,288,744
Saskatoon Dom. Govt. Elev. . . . .	629,001	126,178	1,917	14,348	771,444
Moose Jaw Dom. Govt. Elev. . . . .	334,321	247,684	22,374	1,645	606,024
Vanocuver . . . . .	5,477	85,035	.....	.....	90,512
Total interior terminal elevators . . . . .	1,954,993	723,317	35,575	42,839	7,756,724
Depot Harbor . . . . .	.....	305,635	.....	.....	305,635
Midland—					
Aberdeen Elevator Co. . . . .	321,420	122,432	36,840	.....	480,692
Midland Elevator Co. . . . .	19,961	.....	.....	.....	19,961
Tiffin, G.T.P. . . . .	1,381,013	397,817	201,253	.....	1,980,083
Port McNicol . . . . .	1,170,870	1,865,625	51,104	.....	3,087,599
Collingwood . . . . .	.....	2,450	.....	.....	2,450
Goderich Elevator and Transit Co. . . . .	770,744	249,033	.....	.....	1,019,777
Grain afloat . . . . .	.....	177,815	.....	.....	177,815
Kingston—					
Montreal Transportation Co. . . . .	.....	144,992	.....	.....	144,992
Commercial Elevator Co. . . . .	.....	115,151	.....	.....	115,151
Port Colborne . . . . .	723,583	1,415,205	.....	.....	2,138,788
Montreal—					
Harbor Commissioners no. 1 . . . . .	307,966	1,201,323	37,847	.....	1,547,136
Harbor Commissioners no. 2 . . . . .	132,700	1,088,482	97,583	.....	1,318,765
Montreal Warehousing Co. . . . .	288,934	2,166,033	1,247	.....	2,456,214
Quebec Harbor Commissioners . . . . .	23,190	150,188	.....	*5,393	179,471
West St. John, N.B. . . . .	302,087	204,536	160,843	.....	667,466
Total public elevators . . . . .	5,442,468	9,607,417	586,717	5,393	15,641,995
Total quantity in store . . . . .	27,419,472	21,082,806	1,745,217	1,412,701	51,665,589

\*Corn.

# Transportation Appointments Throughout Canada.

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

**Algoma Central & Hudson Bay Ry.**—R. S. McCORMICK, heretofore Chief Engineer, A.C. & H.B.R., and Algoma Eastern Ry., has been appointed General Superintendent and Chief Engineer, A.C. & H.B.R. Office, Sault Ste. Marie, Ont.

W. C. PAUL has been appointed Assistant Trainmaster. Office, Steelton, Ont.

**Algoma Eastern Ry.**—A. L. SMITH, heretofore Superintendent, London Division, Ontario District, C.P.R., London, Ont., is reported to have been appointed President and General Manager, A. E. R. Office, Sudbury, Ont.

J. A. DeFORGE has been appointed Purchasing Agent. Office, Sudbury, Ont.

**Canadian Government Railways.**—W. N. INGRAM, heretofore Master Mechanic, District 5, Intercolonial Division, Edmundston, N.B., has been appointed Master Mechanic, District 4, Intercolonial Division, vice H. D. McKenzie, transferred. Office, Stellarton, N.S.

H. D. McKENZIE, heretofore Master Mechanic, District 4, Intercolonial Division, Stellarton, N.S., has been appointed Master Mechanic, District 5, Intercolonial Division, vice W. N. Ingram, transferred. Office, Edmundston, N.B.

T. W. McBEATH, heretofore locomotive man, Moncton, N.B., is reported to have been appointed Road Foreman of Locomotives, District 5, Intercolonial Division, with headquarters at Edmundston, N.B.

C. W. McMANUS, heretofore conductor, Sunny Brae, N.S., is reported to have been appointed Trainmaster, District 1, Transcontinental Division. Office, Napadogan, N.B.

L. S. LANDERS, heretofore Resident Engineer, District 3, Intercolonial Division, Truro, N.S., has been appointed Assistant Engineer, Levis, Que.

P. B. ROBB, heretofore chief clerk, Car Service Department, N.B., is reported to have been appointed chief clerk, same department, Winnipeg, vice A. P. Gorbell, promoted.

**Canadian Northern Ry.**—A. T. SMITH, heretofore chief clerk to General Freight and Passenger Agent, Halifax & Southwestern Ry., Halifax, N.S., has been appointed Travelling Freight and Passenger Agent, C.N.R., which includes the H. & S.W.R. Headquarters, Halifax, N.S.

WM. PHILLIPS, Freight Traffic Manager, Eastern Lines, having resigned to enter Cunard Steamship Co.'s service, as announced in our last issue, the duties pertaining to that position are, for the present, being performed by G. H. SHAW, General Traffic Manager, Toronto.

G. N. GOAD, heretofore Inspector of Transportation, Eastern Lines, Toronto, has been appointed Terminal Trainmaster, Toronto Terminals, including Todmorden, with jurisdiction over operations in yard, freight house and team tracks.

J. F. HARVEY has been appointed acting Manager, Prince Arthur Hotel, Port Arthur, Ont., vice A. S. McLean, promoted.

A. S. McLEAN, heretofore Manager, Prince Arthur Hotel, C.N.R., Port Arthur, Ont., has been appointed Assistant General Superintendent of Hotels, Sleeping, Dining and Parlor Car, Hotel and News Department. Office, Winnipeg.

J. T. WHITLAW has been appointed

station agent, Calgary, Alta., vice O. A. Thomas.

A. R. McDOUGALL has been appointed Commercial Agent, C.N.R. and Duluth Winnipeg & Pacific Ry., Minneapolis, Minn., vice C. A. Skog, promoted.



A. B. Calder,  
Assistant General Passenger Agent, Canadian  
Pacific Railway.



W. B. Johnson,  
Master Mechanic, District 6, Intercolonial Division,  
Canadian Government Railways.

C. A. SKOG, heretofore Commercial Agent, Minneapolis, Minn., has been appointed District Freight and Passenger Agent, C.N.R. and Duluth, Winnipeg &

Pacific Ry., Duluth, Minn., vice J. H. McKinnon, transferred to Operating Department.

**Canadian Pacific Ry.**—A. B. CALDER, formerly General Agent, Passenger Department, C.P.R., Chicago, Ill., and latterly conducting a general ticket agency in Winnipeg with his father, has been appointed Assistant General Passenger Agent, C.P.R., Montreal. He will especially attend to United States business and offices.

A. E. GRIGGS, Bridge and Building Master, Brownville Division, New Brunswick District, has had his office moved from McAdam Jct., N.B., to Brownville Jct., Me.

W. B. HARPER has been appointed Resident Engineer, Laurentian Subdivision, Quebec District, vice J. M. Silliman, whose appointment as Resident Engineer, London, Ont., was announced in our last issue. Office, Montreal.

J. K. SAVAGE, heretofore Superintendent, Regina Division, Saskatchewan District, Regina, has been appointed Superintendent, Smiths Falls Division, Quebec District, vice M. A. Fullington. Office, Smiths Falls, Ont.

C. GRIBBINS has been appointed Division Master Mechanic, Smiths Falls Division, Quebec District, vice F. Ronaldson, promoted. Office, Smiths Falls, Ont.

F. RONALDSON, heretofore District Master Mechanic, Farnham Division, Quebec District, Farnham, Que., has been appointed Master Mechanic, Ontario District, vice A. H. Kendall, enlisted for overseas service as captain in the battalion of skilled railway employes now recruiting. Office, Toronto.

W. TANSLEY, Assistant Superintendent, is appointed acting Superintendent, London Division, Ontario District, vice A. L. Smith resigned. Office, London, Ont.

T. FAWCETT, heretofore Assistant General Storekeeper, Western Lines, Winnipeg, has been appointed General Storekeeper, Western Lines, vice L. O. Genest, deceased. Office, Winnipeg.

A. E. HARSHAW, heretofore Chief patcher, North Bend, B.C., has been appointed Chief Dispatcher, Lethbridge, Alta., vice C. W. Fisher.

W. L. CODINGTON, heretofore Resident Engineer, Medicine Hat, Alta., has been appointed Resident Engineer, Revelstoke, B.C.

F. W. ADAMS, heretofore boiler maker, Lethbridge, Alta., is reported to have been appointed Foreman Boiler Maker, Revelstoke, B.C., vice S. Blower, transferred.

K. A. R. DOUGLAS, heretofore Chief Dispatcher, Souris, Man., has been appointed Chief Dispatcher, North Bend, B.C., vice A. E. Harshaw, transferred.

**Duluth, Winnipeg & Pacific Ry.**—J. H. McKINNON, heretofore District Freight and Passenger Agent, C.N.R. and Duluth, Winnipeg & Pacific Ry., Duluth, Minn., has been appointed Superintendent, D.W. & P.R. Office, Virginia, Minn.

**Grand Trunk Ry.**—L. J. ROULEAU, heretofore chief clerk, Division Freight Agent's office, Montreal, has been appointed Commercial Agent, Quebec, Que.

H. R. McLENNAN, heretofore Chief Dispatcher, London, Ont., has been appointed Trainmaster, Districts 20 and 21, London Division, Ontario Lines, vice R. H. Fish, promoted. Office, Brantford, Ont.

C. KELSO has been appointed acting Master Mechanic, Stratford, Ont., during the absence of R. PATTERSON, who has

been loaned to the Imperial Munitions Board, for the remainder of the war, and placed in charge of the General Car and Machinery Co.'s plant at Montmagny, Que.

W. M. DOHERTY, heretofore Night Chief Dispatcher, London, Ont., has been appointed Chief Dispatcher, Brantford, Ont., vice A. F. Sharpe, transferred.

A. F. SHARPE, heretofore Chief Dispatcher, Brantford, Ont., has been appointed Chief Dispatcher, London, Ont., vice H. R. McLennan, promoted.

J. R. BRENT has been appointed Night Chief Dispatcher, London, Ont., vice W. M. Doherty, promoted.

J. CALDWELL, heretofore Superintendent, Detroit Division, Western Lines, Detroit, Mich., has been appointed Agent at Chicago, Ill.

W. R. EASTMAN, chief clerk to General Passenger Agent, Central Vermont Ry., St. Albans, Vt., has been appointed New England Passenger Agent, G.T.R., Boston, Mass., vice E. H. Boynton, retired.

The following station agents have been appointed: Strathmore, Que., D. Rousse; Sutton, Ont., R. G. Winters; Craigvale, Ont., C. J. Alliston; Wilno, Ont., G. C. McFarlane.

**Grand Trunk Pacific Ry.**—W. J. STURGESS, heretofore Storekeeper, Transcona, Man., has been appointed acting Assistant Purchasing Agent, vice A. H. Mulcahey, loaned to the Imperial Munitions Board. Office, Winnipeg.

W. G. WHITELEY has been appointed acting Storekeeper, Transcona, Man., vice W. J. Sturgess, promoted.

L. V. DRUCE, heretofore Commercial Agent, Vancouver, B.C., has been appointed Division Freight Agent, Edmonton, Alta., vice A. E. McMaster, resigned.

A. DAVIDSON, heretofore Commercial Agent, Prince Rupert, B.C., has been appointed Commercial Agent with jurisdiction in B.C. territory, Rivers Inlet and south, including Vancouver, Victoria and Vancouver Island, reporting to Assistant General Freight and Passenger Agent at Prince Rupert, vice L. V. Druce, promoted. Office, Vancouver, B.C.

J. D. McAULEY, heretofore Travelling Freight and Passenger Agent, Juneau, Alaska, has been appointed Commercial Agent with jurisdiction in territory north of Rivers Inlet, including Queen Charlotte Islands, reporting to Assistant General Freight and Passenger Agent, Prince Rupert, vice A. Davidson, transferred. Office, Prince Rupert, B. C.

The following station agents have been appointed: Pembina Highway, Man., R. R. Tully; Watrous, Sask., H. McCreddie; Ruthilda, Sas., J. H. Gamble; Edgerton, Alta., M. O. Knudson.

**Pennsylvania Rd.**—C. B. BRODIE, heretofore Canadian Passenger Agent, Toronto, has been appointed District Passenger Solicitor, Newark, N.J., vice C. E. McCullough.

J. E. LITTLE, heretofore Passenger Solicitor, New York, has been appointed Canadian Passenger Agent, vice C. B. Brodie, promoted. Office, 56 King St. West, Toronto.

The Timiskaming & Northern Ontario Railwaymen's Patriotic Association's subscriptions to the Canadian Red Cross and Canadian Patriotic Funds, to Oct. 31, 1916, including \$9,651.95 paid direct to enlisted employees, were \$41,961.83. These amounts are exclusive of personal subscriptions by the commission and employees, and also of the monthly subscription to the 50,000 club by the Toronto staff.

## Canadian Northern Railway Construction, Betterments, Etc.

**Canadian Northern Quebec Ry.**—The Dominion Parliament is being asked to extend the time for the completion of the projected branch lines from Rawdon to the National Transcontinental Ry., with a branch line from Rawdon to Joliette; and a line from St. Jerome to St. Eustache, Que.

**Mount Royal Tunnel and Terminal Co.**—The Dominion Parliament is being asked to extend the time within which the company may complete its railways and station building in Montreal.

A contract has been let to Norcross Bros., of Montreal, for the erection of the temporary station building on Lagauchetiere and St. Monique Streets. The excavation of the larger area on which the permanent station will be erected will be done by Angus Sinclair, of Toronto. This latter contract involves the removal of some 280,000 cubic yards of material.

**Canadian Northern Ry.**—The ratepayers of Fort William, Ont., decided Jan. 1, by a vote of 409 to 362 in favor of the Vickers St. site for the proposed station for the C. N. R.

A press report states that the company has let contracts to lumbermen along its line between Port Arthur, Ont., and Warroad, Minn., for the supply of 1,300,000 ties and 200,000 posts and poles.

No new track was laid on C. N. R. lines in Manitoba, Saskatchewan or Alberta during 1916.

The company, it is reported, proposes to locate a stockyard near the government elevator at Saskatoon, Sask., at a cost of \$30,000.

**Canadian Northern Pacific Ry.**—In connection with the building of the branch line from Kamloops the company acquired 90 acres of land in the Kelowna district. Through this area the right of way has been located, and the company claims that the whole 90 acres is thereby exempted from taxation. The town claims that at the most only six acres of this land is exempt, and desires to collect taxes on the balance. Judgment has been reserved in the Court of Appeals, which is being asked to reverse the decision of the lower court that the whole area is exempt.

The C. N. P. Ry. at present obtains an entrance into Vancouver over Great Northern Ry. tracks and to make use of these passes over the New Westminster bridge, owned by the province. The company was reported Jan. 5 to have paid up arrears of rental for the use of this bridge, and to be ready to sign an agreement with the government as to the future rental to be paid.

The installing of machinery in the car shops at Port Mann is reported to be well forward and it is expected that the shops will be ready for the construction of cars March 31.

An agreement is reported to have been reached between the company and the New Westminster City Council under which, in return for certain concessions, the company will remove certain tracks of the C.P.R. and of the British Columbia Electric Ry. to C. N. P. R. property. The total cost of the work is estimated at \$100,000. The principal concession granted the company is the right to use Front St. for railway purposes, and the removal of the tracks is necessary in order that the city may extend Columbia St. through to 12th St. without having to carry it across the tracks.

The time within which Champion and White, who claimed certain riparian rights on part of the False Creek area, Vancouver, could appeal against the decision debarring them from further objection to the reclamation works having expired without notification of further proceedings being taken, it is expected that much more rapid progress will be made with the work than heretofore. The particular work with which these proceedings interfered was the building of the sea wall. A large quantity of concrete piling for this is already on the spot.

It was reported Jan. 5 that construction on the Vancouver station building would be started by Jan. 31.

**Lines on Vancouver Island.**—Good progress is reported to have been made with the construction of the car ferry slip at Patricia Bay, Vancouver Island. As soon as this is completed, which will probably be by April 1, a regular car ferry service will be maintained with the mainland.

The line from Patricia Bay into Victoria is being ballasted and got ready for traffic. The only piece of construction on the line unfinished is the bascule bridge at Selkirk Water, which is being built by the Canadian Bridge Co., Walkerville, Ont.

The grading of the Barkley Sound line is practically completed to mile 106, and the steel for this line is now being delivered at Port Mann. It will not be taken over until the ferry service is put in operation at Patricia Bay. The steel for the bridges necessary on the line will also be taken by the same route. It is reported that this 106 miles will be completed this year. (Jan., pg. 22.)

### International Railway of New Brunswick.

The following press dispatch was sent from St. John, N.B., Jan. 12: "The Dominion Government organ here says the Government has acquired the International Ry., which runs from Campbellton to St. Leonards, N.B., and the Maine border. It hints at the purchase price being between \$2,000,000 and \$3,000,000.

We are officially advised that negotiations for the purchase of this railway were on when war broke out. It was then decided to enter into an agreement to purchase the line at any time within a five year period. In the meantime, the Dominion Government is paying rental on the road based on the price agreed upon, and it has been operated as a branch of the Intercolonial Division, Canadian Government Railways, since July 31, 1914. The promoter and builder of the line, Thos. Malcolm, of Campbellton, N.B., died recently.

**Utilizing Abandoned I.R.C. Right of Way.**—At a meeting of the Dorchester, N.B., County Council, Jan. 18, a letter from the Assistant to the General Manager, Canadian Government Railways, was read stating that the C.G.R. would lease to the Parish of Moncton, "the portion of the abandoned right of way of the Intercolonial Ry. from Moncton to Berrys Mills, which will be properly described in the lease, for two years, and thereafter during the pleasure of the management, at a nominal rental of \$1 a year, the parish to maintain the roadway."



**Traffic Orders by Board of Railway Commissioners.**

**Storage and Demurrage at Sarnia, Capreol, and North Bay.**

General Order 175. Dec. 26, 1916. The track storage and demurrage and general order 174, Dec. 23, 1916, prescribing tolls at all points in Canada from Jan. to April 30, 1917, both inclusive. It is ordered that the following charges for demurrage and track storage apply upon grain and lumber held in transit at Cartier, Sarnia, Capreol, and North Bay, from Jan. 1 to April 30, 1917, both inclusive: 24 hours, free; 48 hours, \$1; 72 hours, \$2; 96 hours, \$5; 120 hours, \$10; 144 hours, \$15; 168 hours, \$20; subject to an increase of \$5 for each addition 24 hours or part thereof. It is further ordered that order 24436, Nov. 11, 1915, as amended by order 25285, Aug. 18, 1916, be suspended from Jan. 1 to April 30, 1917, both inclusive.

**Moncton & Buctouche Ry. Tariff.**

25737. Dec. 20, 1916. Re application of Moncton & Buctouche Ry. under sec. 327 of the Railway Act, for approval of its Standard Freight Mileage Tariff, C. R.C. 23. It is ordered that the said tariff be approved subject to the condition that the 5th class rate for the 11-15 mile group be reduced from 7 to 6c per 100 lbs.

**Classification of Health Salts.**

25755. Dec. 26, 1916. Re application of Harry Horne Co., Toronto, for the same specific classification for health salts as provided in the Canadian Freight Classification for Epsom salts. Upon hearing the application at Toronto, Oct. 5, 1916, in the presence of the Chairman of the Canadian Freight Association for the railway companies, the applicant company being represented, and upon the report of the Board's Chief Traffic Officer, it is ordered that the application be refused.

**Mileage Rates on Forest Products.**

25761. Re complaint of Mountain Lumber Manufacturers' Association, of Nelson, B.C., against proposed cancellation by C.P.R. of mileage rates on forest products for distances over 500 miles, effective Jan. 1, 1917. Upon its appearing that the said rates for distances over 500 miles, as now in effect in C. P. Tariff, C.R.C. no. W-2055, are being used by the complainant and others; and that their cancellation will injuriously affect the complainant's business, it is ordered that the C.P.R. publish and file a supplement to its Tariff C.R.C. no. W-2214, containing the rates on forest products for distances over 500 miles, as published in rate column no. 7 of its Tariff C.R.C. no. W-2055; such supplement to become effective Jan. 1, 1917.

**Freight Interchange at Brantford.**

25764. Re order 25570, Oct. 27, 1916, authorizing construction of an interchange track between the Lake Erie & Northern Ry. and the Toronto, Hamilton & Buffalo and Grand Trunk Railways, at Brantford, Ont., and the application of the Dominion Steel Products Co., for an order directing the Toronto, Hamilton & Buffalo and Lake Erie & Northern Railways to interchange cars on the temporary track connecting the said railways where they cross each other in Brantford. Upon reading what has been filed in support of the application and on behalf of the railway companies interested; and the report and recommendation of the Board's Assistant Chief Engineer, it is ordered that the Toronto, Hamilton & Buffalo and the Lake Erie & Northern

Railways be required, pending the construction and completion of the permanent interchange track authorized under order 25570, to interchange cars on the temporary track connecting their railways, where they cross each other in Brantford.

**Rates on Zinc Clad Nails.**

25798. Jan. 11.—The application of Shingle Agency of British Columbia for authority to include with shipments of shingles from B.C. the requisite quantity of zinc clad nails, the nails to be charged the same rates as the shingles. Upon hearing the application at Vancouver, June 26, 1916, the applicant and the Canadian Pacific and Canadian Northern Railways being represented, and upon the Chief Traffic Officer's report and recommendation, and reading the further written submissions filed, it is ordered that the application be refused.

**Freight Rates From United States.**

General order 177. Jan. 10.—Re question of way tariffs of freight rates from points in the United States to points in Canada should not bear a notation to the effect that unless specifically indicated as being competitive, they will automatically apply to intermediate points in Canada not mentioned in the tariff, notwithstanding Interstate Commerce Commission rule 77 (a) of circular 18-A. Upon hearing the matter at Ottawa, Dec. 19, 1916, the Canadian Pacific, Grand Trunk, and Ottawa & New York Railways, the Michigan Central Railroad, the Toronto Board of Trade, and the Canadian Manufacturers' Association being represented, the representatives of the railway companies consenting, it is ordered that tariffs of freight rates from points in the U.S. to points in Canada include, or be supplemented by, a rule to the effect that the said rates, unless specifically indicated as being competitive, will apply to intermediate points in Canada not enumerated in the said tariffs, and that railway companies arrange accordingly.

**Passenger Rates, Chicago to San Francisco.**—The Interstate Commerce Commission decided at Washington recently, in the case of the Public Service Commission of the State of Washington vs. Alabama & Vicksburg Ry. et al, that all-year excursion passenger fares and summer tourist excursion passenger fares from Chicago to San Francisco, applicable in either direction by way of Seattle, Wash., or Portland, Ore., were unduly prejudicial, to the extent that they exceeded the corresponding fares contemporaneously in effect from Chicago to San Francisco, applicable in either direction via New Orleans, La., or El Paso, Texas. The decision really means a reduction of rates from Chicago, St. Louis, etc., to San Francisco, of approximately from \$17.50 to \$20. An order in accordance with the decision was issued to become effective Feb. 15, but, a rehearing having been asked, the effective date has been postponed to Apr. 2.

**Canadian Society of Civil Engineers, Toronto Branch.**—At the annual meeting on Jan. 11, the following officers were elected for the current year: Chairman, E. W. Oliver; Secretary Treasurer, L. M. Arkley; Executive Committee—H. G. Acres, A. H. Harkness, T. T. Black and E. G. Hewson. The retiring Chairman, G. A. McCarthy, also acts as a member of the Executive Committee.

**Canadian Northern Railway Earnings, Etc.**

Gross earnings, working expenses, net earnings, increases, compared with those of 1915-16, from July 1, 1916:

	Gross Earnings	Expenses	Net Earnings	Increase
July	\$3,834,200	\$2,636,800	\$1,197,400	\$ 711,000
Aug.	3,684,900	2,612,900	1,072,000	614,300
Sept.	3,187,900	2,455,300	732,600	177,300
Oct.	3,716,800	2,496,500	1,220,300	36,700
Nov.	3,722,300	2,472,300	1,250,000	88,600
	\$18,146,100	\$12,673,800	\$4,322,400	\$1,149,900
Incr	\$4,230,100	\$3,080,200	\$1,149,900	.....

x Decrease  
Approximate earnings for Dec., \$3485,400, and for three weeks ended Jan. 21, \$1,903,000, against \$3,235,600, and \$1,514,400, for same periods, 1915 and 1916.

**Canadian Pacific Railway Earnings, Etc.**

Gross earnings, working expenses, net earnings, increases, or decreases, compared with those of 1915-16, from July 1, 1916:

	Gross Earnings	Expenses	Net Earnings	Increase
July	\$12,247,440.39	\$8,230,348.66	\$4,017,091.73	\$1,216,688.61
Aug.	13,570,467.31	7,802,680.46	5,467,786.85	2,025,472.13
Sept.	12,134,159.96	7,004,400.80	5,129,759.16	384,458.52
Oct.	13,237,086.36	7,562,346.99	5,674,739.37	904,694.78
Nov.	13,401,943.90	7,837,983.76	5,563,960.14	790,452.89

\$64,291,097.92 \$38,437,760.67 \$25,853,337.25 \$1,931,471.59  
Inc. \$10,526,607.53 \$8,595,135.94 \$1,931,471.59

x Decrease  
Approximate earnings for three weeks ended Jan. 21, \$6,870,000, against \$5,647,000 for same period, 1916.

**Grand Trunk Railway Earnings.**

Following are the earnings and expenses for the G.T.R., including the Canada Atlantic Ry., the G.T.W.R. and D.G.H. & M.R., for November:

Grand Trunk Railway.		
Earnings	.....	\$4,317,200
Expenses	.....	3,272,000
Net earnings	.....	\$1,045,200
Grand Trunk Western Railway.		
Earnings	.....	\$ 759,600
Expenses	.....	692,900
Net earnings	.....	\$ 66,700
Detroit, Grand Haven & Milwaukee Railway.		
Earnings	.....	\$ 266,800
Expenses	.....	261,300
Net earnings	.....	5,500

Approximate earnings for Dec., \$5,280,245, and for three weeks ended Jan. 21, \$3,112,728, against \$4,819,124, and \$2,797,917, for same periods, 1915 and 1916.

**Traffic Receipts of the System.**

	Aggregate from Jan. 1 to Dec. 31:	1916.	1915.	Increase.
G.T.R.	.....	\$47,286,799	\$39,820,694	\$8,006,105
G.T.W.R.	.....	9,191,107	7,876,264	1,314,843
D.G.H. & M.R.	.....	3,823,992	2,884,912	399,080
Totals	.....	\$60,301,898	\$50,581,870	\$9,720,028

**Grand Trunk Pacific Railway Earnings.**

The approximate earnings of the Prairie Section, 916 miles, for Nov. were \$652,145, against \$848,169 for Nov., 1915; \$608,136 for Dec., against \$744,584 for Dec., 1915. The aggregate earnings from July 1 to Dec. 31 were \$2,903,289, against \$3,451,310 for same period, 1915.

**Demurrage Decision.**—The Interstate Commerce Commission has refused to sanction a proposed rule of the New York, New Haven & Hartford Rd. and affiliated lines providing that, when cars are held in transit short of billed destination, or on storage tracks at destination, because of the failure of consignees to unload within the free time cars placed for delivery, the published demurrage charges will apply on the cars so held and no additional free time will be allowed after final placement.

# Canadian Northern Railway's Report for Year Ended June 30, 1916.

The following report has been issued over the signature of Sir Wm. Mackenzie, President: The results of operations for the fiscal year were as follows:

Gross Earnings:	
Passenger traffic . . . . .	\$ 6,128,470.76
Freight traffic . . . . .	26,560,213.12
Express, mail, telegraph, interest and profits from elevators and other subsidiary companies, investments, etc. . . . .	2,787,591.18
	\$35,476,275.06
Working expenses (including taxes, etc.) . . . . .	26,102,744.52
Net earnings . . . . .	\$9,373,530.54
Deduct fixed charges . . . . .	9,621,657.70
Net loss or deficit . . . . .	\$248,127.16

The system had under operation an average of 8,048 miles in 1916, compared with an average of 7,269 miles in 1914-15, an increase of 779 miles, or 10.72%.

The Total Operating Revenues were \$35,476,275.06, an increase of \$9,564,168.76, or 36.91% over 1914-15. The increases in revenue were derived as follows: Passenger traffic, \$717,246.39, or 13.25%; freight traffic, \$8,352,412.60, or 45.87%; mails, \$12,877.97, or 6.05%; express, \$195,064.70, or 30.27%, and miscellaneous traffic, \$286,567.10, or 19.96%. While a portion of these increased earnings is due to an increased mileage, a substantial improvement has been made in the system's business. This is indicated by the fact that earnings per mile of road for the year were \$4,408.08, compared with \$3,564.74 for the previous year, an increase of 23.66%.

The system's new mileage on the Pacific Coast and the Northern Ontario Divisions have not yet come into full earning power, as operation on them was only commenced in the late autumn of 1915. It will be realized that time is required for the creation of industries to develop the natural resources of these newly opened-up sections of the country. The system is fortunate in the possession of vast timber, mineral, and agricultural traffic resources on these new lines; and the business from them must be eventually profitable. When the lines were surveyed, the traffic from the development of these resources was foreseen, and it is pleasant to be able to report that actual operations are proving these expectations well founded. The British Columbia section, from the commencement, produced each month substantial increases in revenue, and, before the close of the fiscal year, yielded most encouraging revenues. Much of the business offering is from the Pacific Coast to points inland, but a commencement has been made in the marketing of the excellent timber tributary to the line, and in the cultivation of the rich lands in the valleys through which the railway traverses the mountain country. There is a considerable acreage of land suitable for intensive farming along the company's railway, and its products will find a ready market on the Pacific Coast. The excellent showing made by the mileage in British Columbia, after only seven months of operation, may be well considered an outstanding feature in the year's operations. The colonization of Northern Ontario has been retarded by the war; but, peculiarly enough, there is a compensating feature in the inordinate demand for paper and its consequent startling increase in costs. The spruce balsam, and jack-pine woods, suitable for making pulp, and of which there is an abundance tributary to the company's lines, are finding an immediate market

demand. The Ontario Government has offered for sale a large acreage of wood; and the company, having 2,000,000 acres of land, mostly covered with pulpwood, is undertaking their development. Arrangements are being made for the establishment of pulp and paper mills in the districts and, in the meantime, large shipments of pulpwood will be made to mills already under operation in the older sections of the country. Mills for the sawing of merchantable timber are also being erected along the company's lines.

A large part of the increase in freight revenue originated from grain traffic. The system carried 131,978,809 bush. of grain in 1916, compared with 58,575,520 bush. in 1915, an increase of 125.31%. Inasmuch as many of the security holders invested their funds in the company's undertakings, believing that the heart of the Empire would some day need to draw heavily upon the wheatfields of the Canadian West, it is with pride that the directors present these figures, illustrating the extent to which the prairies have been opened up, made productive, and the produce marketable by the company's railways. There were probably few who thought that the crucial necessity would come so soon; but, having come, it must be considered fortunate that the Canadian Northern System and the country tributary to it were sufficiently developed to take an important part in supplying the Empire's food requirements. To the preponderance of grain traffic—this commodity being carried at a low rate—is due the decrease in the revenue per ton per mile from 00.831c. to 00.679c, or 18.29%. It is interesting to note, however, that the average distance a ton of freight was hauled, increased from 204.08 miles to 288.46 miles, or 41.35%, with, of course, a marked advantage in operating results.

The passenger train earnings per train mile increased from 87.409c. to 93.379c., or 6.83%. The system's passenger and freight earnings, during the year, were affected by the lack of two important terminals which are under construction, but were not completed in time to take care of transcontinental business. It is expected that the tunnel under Mount Royal and a station for the system's business in the heart of Montreal, will be ready for operation in the spring of 1917. The Vancouver terminal is under construction and, it is expected, will be available for the system's business in the summer of 1917. The station at Toronto, which the system will occupy with the C.P.R., has been completed.

The system has also been handicapped by not having a line from Toronto to the Niagara peninsula, connecting with the railway systems of the United States converging at the Niagara frontier. When this line is constructed, it will give the system the further advantage of rail connection with its electric subsidiary line, the Niagara, St. Catharines and Toronto Ry., now serving the important manufacturing district of the Peninsula. Delays in the completion of these undertakings, without which neither a satisfactory transcontinental business nor an entirely successful eastern passenger and fast freight business can be possible, have occurred, as a result of disturbed conditions of finance resulting from the war; and the directors would emphasize the fact that revenues for the year have been obtained notwithstanding the lack of these much-needed facilities.

The Operating Expenses were \$26,102,-

744.52, compared with \$19,288,514.42 for 1915, an increase of 35.33%. A portion of this increase is due to the operation of a greater mileage and to the expenses incidental to taking over new lines which were operated for only a portion of the year. But, with the heavier traffic, the system was naturally compelled to expend a relatively larger amount in operation, spending for this purpose \$3,243.38 a mile compared with \$2,653.57 the previous year. The system is paying a wage schedule well up to the level of the highest standard. The labor situation in the newer sections of the country has been particularly difficult to meet, but with increasing settlement may be expected to improve. The weather conditions in the winter period covered by the report were unprecedentedly bad in Northern Ontario and Western Canada, where the system has a large mileage under operation. British Columbia was subjected to a lower temperature and a greater fall of snow than in any time in the previous 20 years. These conditions added substantially to the expense in the cost of operation. The working expenses for the year were 74.73% of the operating revenue, a reduction of 1.93 from the previous year. Including revenue from all sources the ratio of working expenses, including taxes, was 73.58%, compared with 74.44% for the previous year.

**Land Department:** During the year, according to government returns, only 51,243 immigrants came into Canada. Immigration on a large scale is not to be expected until after the declaration of peace; and, in the meantime, sales of western lands are naturally limited. During the year there were sold of the system's lands, 19,443 acres, at an average of \$16.37 an acre, or an aggregate of \$318,248.32. The previous year's sale price averaged \$15.53 an acre. There were cancelled, by mutual arrangement, agreements for the sale of 4,850 acres; so that the net acreage of land available for sale has been decreased by 14,593 acres, leaving 843,127 acres in the prairie provinces available for sale. Land grant bonds of the issue of 1909 amounting to \$272,533 were retired, leaving outstanding in respect of this issue \$2,217,740.

**Car Trust Obligations:** No car trust obligations were created, and \$3,628,000 were paid in respect of obligations made in previous years.

**Ocean Steamship Services:** An agreement of great importance in the development of the system's freight and passenger traffic, was made during the year with the Cunard Steamship Co. Under its terms the Cunard Co. has taken over the Atlantic steamships controlled by the C.N.R., and a close working alliance is in effect between the two companies, the various Canadian services of the Cunard line and the Canadian Northern having become, in effect, a single transportation unit between Europe and Canada. Steamship services on the Pacific Ocean are also in contemplation. The arrangement was not completed in time to be of benefit to last year's earnings, but will from now on become of benefit and, after the conclusion of the war, must result in giving to both parties a very substantial and remunerative business.

**General Remarks:** Since the new lines through Northern Ontario and British Columbia, making the system transcontinental, have been brought under operation during the year under review, your directors deem it advisable to state the salient

facts in connection with these lines and to refer to the position the system will henceforth occupy in relation to the traffic of the country. The construction of the new lines involved a greater expenditure than was first contemplated. During the years of construction your directors became impressed with the increasing weight of train loads, which necessitated the older established railways in Canada and the U.S. spending huge sums of money in line revision, and decided that it would be true economy to build these important sections of the system's main line to a standard that would forever obviate the necessity of revisions for grade improvement. As a result, your railway now crosses the summit of the Rocky Mountains by means of 7/10 of 1% grades confined within one division; and these are the heaviest gradients opposing east-bound traffic—the direction of the heaviest haul—between the waters of the Pacific at Vancouver and the waters of the Atlantic at Montreal. Nowhere else on the Pacific Coast Divisions and nowhere on the new lines in Northern Ontario, are grades in excess of 5/10 of 1%. The possession of these favorable grades has given the system an all important advantage in the economy of operation, particularly in carrying the two commodities offering in largest volume, viz., lumber from the Pacific slope of the Rocky Mountains to the prairies and eastern points, and grain from the prairie provinces to Eastern Canada and Atlantic ports. The main line from Quebec to Vancouver is superior to any line crossing the American continent in points of grades and curvatures favoring traffic. Although the transcontinental line has been in operation for only a few months, its superior economies have established the fact that the road must assume a commanding position when traffic has grown to dimensions making general the use of heavy trainloads.

In this connection it becomes necessary to examine the locations of the lines from the point of traffic opportunities, this being of not less importance than the physical condition. The system's railways occupy an enviable position in the prairie provinces, in which the first mileage was constructed. Assuming the population of villages and towns having 1,000 inhabitants and over to be urban, the system's railways serve 90% of the urban population of Alberta, and 97% of the urban population of Saskatchewan and Manitoba. In British Columbia the system has lines serving 78% of the urban population. In Ontario and Quebec, the provinces from which manufactured products are mainly derived for Canadian consumption, the system will have access to cities and towns with 70% of the factory output of these two provinces, when the 40 miles of railway to Hamilton, for which right of way and terminal properties have been secured, is in operation. Further than this, the system's railways are now serving 75% of the aggregate population of the cities and towns of all Canada having 5,000 inhabitants and over. It is only to be expected that the system will not come into full earning power immediately. The initial years of transcontinental operation are involving terminal improvements, increases in equipment, changes in organization, and the building up of traffic connections. For some time past your directors have had plans prepared for these matters, which it was hoped to put into effect so soon as the lines between Quebec and Vancouver were completed; but, as a result of the disturbed conditions of finance, this was

found to be impossible. It is hoped, however, that during 1917 substantial progress will be made and, as the plans are carried into effect, the beneficial results will become apparent in the earnings of the system.

The prospects for grain tonnage for the coming year are not as good as they were last year, as will be seen by the following statement of the grain yields for the three prairie provinces, compiled by our Grain Information Bureau; and, although complete returns are not yet available—threshing still being under way—they may be regarded as approximately correct. The yields are as follows: Wheat, 170,500,000 bush.; oats, 280,000,000 bush.; barley, 44,500,000 bush.; flax, 6,700,000 bush.; total, 501,700,000 bush. According to these figures, the 1916 crop will be less than the 1915 crop, by about 250,000,000 bushels; but it is necessary to remember in this connection, that there remained over from the 1915 crop, in the territory tributary to the system's lines, 38,000,000 bush. of grain, which in all probability will be marketed this year. The prices realized by farmers for the 1916 crop, and the unmarketed part of the 1915 crop, are much better than they were a year ago; and the statement which is made to the system's management by an official of the Alberta Department of Agriculture that "the net result this year will increase the farmers' income by several million dollars," in indicative of the generally strong financial position of grain growers along C.N.R. lines in middle Canada. While the proceeds derived by farmers from the 1915 crop were largely required to liquidate past obligations, the returns from the 1916 crop are largely available for the purchases of live stock, machinery, building material, and general merchandise. Fortunately, the system, having its lines directly connected up with the grain country of Western Canada, the industrial centres of Eastern Canada, and the seaports of the Atlantic and Pacific, is in the position to make up the shortage in grain tonnage by a tonnage in general commodities which will be carried at more remunerative rates. The present situation emphasizes the fact that the railway is not as dependent upon grain crop movements as in the past; and, in becoming transcontinental, has acquired a highly diversified traffic.

The following statement of the comparative gross traffic earnings for the four months succeeding the fiscal year under review, is submitted as evidence of this contention:

	1916.	1915.	Increase.
July . . . . .	\$3,834,200	\$1,961,700	\$1,872,500
August . . . . .	3,684,900	1,983,600	1,701,300
September . . . . .	3,187,900	2,757,000	430,900
October . . . . .	3,716,800	3,678,500	38,300
Totals . . . . .	\$14,423,800	\$10,380,800	\$4,043,000

In Oct., 1915, there was a heavy grain movement, and it is pleasing to note that the traffic in other commodities has more than offset the lighter grain movement this year. General trade prospects for the next fiscal year are good. For the 12 months ended Sept. 30, 1916, the total export and import trade of Canada was \$803,000,000 in excess of the corresponding period the previous year; and, fortunately for the country, the balance of trade is on the right side, exports having exceeded imports by \$367,000,000. The exports for this period were \$534,000,000 in excess of the exports for the same period the previous year. Statistics gauging the extent of domestic trade are not available, but if railway tonnage be a measuring gauge—and it is usually accepted as such—the general domestic

trade of the country is substantially better than it was a year ago.

There is, naturally, keen speculation as to the future of Canada after the war, and this is increased by the patent fact that a large measure of the country's present prosperity is due to productions for war purposes. While your directors hesitate to express their views on this matter, they feel assured that the industrial disarrangement through peace will be less serious and of shorter duration than the disarrangement which occurred in 1914 as a result of the war. It must not be forgotten that Canada is essentially a country of the future. Her stock of natural resources remains largely intact. Her vast known mineral wealth is only in the initial stages of development. Her timber resources can be valued in the hundreds of millions of dollars, and will become even more valuable during the world's reconstruction days. Her agricultural resources, which have been the country's mainstay, are still capable of vast development, only one quarter of the surveyed, arable land being under occupation, and less than one eighth of it under annual cultivation. The knowledge of these things must serve to create a spirit of optimism in Canada's future; and a realization that a large portion of these timber, mineral, and agrarian undeveloped resources, now made accessible through the system's new lines, has convinced your directors that the system is capable of an immeasurable expansion in earning power. These things are set forth because your directors believe there is need for a better understanding of the extent to which the system is prepared to enter into the transportation services of Canada, and in partial explanation of the belief they firmly hold that the ultimate prosperity of the C.N.R. system is measurable only by the prosperity of Canada.

**New Directors:** During the year three new members were added to the directorate: W. K. George, of Toronto, Vice President, Sterling Bank of Canada; W. J. Christie, a prominent business man of Winnipeg, and H. W. Richardson, head of James Richardson & Sons, grain merchants, Kingston, Ont.

**Steel Rails Duty.**—In reference to statements which have been made in various papers as to the suspension of duty on steel rails imported into Canada, we are officially informed that no general order in council has been passed suspending the duty. Several of the railways wanted to make contracts for their requirements for the upkeep of their tracks and Canadian steel mills were unable to take these contracts, owing to having large orders for munitions. The railway companies were therefore compelled to look to the United States for their supply at a largely advanced price. Some of the companies applied for a refund of duty, and in each case a refund of duty will be granted on rails so imported during a certain period, with the exception of the war tax of 7½%, which will have to be paid by the railways. It was found absolutely necessary for the government to take action along these lines in order to enable the railways to keep up their maintenance and facilitate traffic during the war.

**G.T.R. Taxes in Michigan.**—The Michigan State Legislature is considering an amendment to the constitution to permit the state to own and control railways, with a view, it is said, of dealing with a claim against the G.T.R. for taxes dating back to 1834, when the Detroit & Pontiac Ry., now a part of the G.T.R. system, was built.

# Electric Railway Department

## The Montreal Tramways Co's Car Service.

There has been some complaint of late with respect to the Montreal Tramway Co.'s service. A statement in regard to the matter was made recently by J. E. Hutcheson, General Manager, in the course of which he said that the cause was due to the insufficiency of power. The company, a year ago, took steps to provide for an additional 17,000 h.p., which was expected to have been ready to be turned on during Nov., 1916. The contractors for boilers, engines and generators were unable to make deliveries and it is not expected that the additional plant will be ready for operation before March.

F. W. Hibbard, Chairman of the Quebec Public Utilities Commission, made the following statement Jan. 16: "The defects in the Montreal Tramways Co.'s service have been under investigation by the commission. The partial failure in service is due simply to lack of power. The source of the company's supply is almost entirely hydraulic, and the winter conditions have seriously affected this. The company is making every possible effort to overcome the shortage and instal an auxiliary steam plant. As to the responsibility for such a plant not having been installed before, there is not sufficient data to express a definite opinion. The chairman of the commission has taken charge of the matter himself, and has called for traffic reports and other details with a view to determining this question. It is fair to say, however, that if the company's contractors had kept their engagements it would have ample power today. A full report will be submitted later."

## Another Electric Railway Proposed for London.

In connection with the cutting down of service on the G.T.R. London, Huron & Bruce line from two trains to one each way every day, under the plan approved by the Board of Railway Commissioners for the relief of freight congestion, a proposal has been made in London, Ont., for the electrification of the line under municipal auspices. The line was originally projected as a municipal enterprise, about the same time as the London & Port Stanley Ry., but was handed over to the G.T.R., the city financing it to the extent of \$75,000. P. Pocock, Vice Chairman of the London Railway Commission, is reported to have said in an interview Jan. 15: "If we could have the Board of Railway Commissioners or some other competent body fix the value of the line and the G.T.R. interest in it as a basis upon which the people could take it over, the scheme could be carried out to advantage. Having acquired it at a fair price, we might then approach all of the municipalities concerned to have them join with us in electrifying the line and placing it on a thoroughly modern basis, on the high standards set by the London & Port Stanley Ry. By working out an equitable plan in that manner, and having the bonds guaranteed there would be no particular burden on any one. The people have shown what they can do by electrification on the L. & P.S.R. When a frequent and fast service is provided, shipping and travel is encouraged, and

the people are given access to the different points along the line and an outlet is provided for the merchandise of the city and the products of the rural parts. Moreover, the line could be made a unit in the provincial hydro electric radial scheme, and in my opinion would bring added prosperity and great benefits to all."

## Nova Scotia Tramways and Power Co., Limited.

All arrangements were completed and the documents filed, Jan. 12, transferring the Halifax Electric Tramway Co.'s property, franchises and assets to the Nova Scotia Tramways & Power Co. This transfer terminates the contest which has been carried on for nearly three years by the Halifax City Council in the N. S. Legislature and elsewhere to prevent the sale of the local company. The N.S.T. & P.Co. has a capitalization of \$5,000,000, equally divided between preferred and common stock, and has power to issue \$10,000,000 of bonds. The officers and directors are: President, E. A. Robert, Montreal; Vice President, O. E. Smith, Halifax; other directors: W. G. Ross, F. H. Wilson, J. W. McConnell, Montreal; H. H. Smith, W. H. Covert, K.C., H. R. Mallison, Halifax, and P. J. McIntosh, New York.

Halifax Electric Tramway Co. shareholders have received notification that on a valuation of \$203.50 a share they can exchange their stock for N.S.T. & P. Co.'s stock on the basis of 75 for the new company's preferred and 40 for the new company's common stock. Of the 14,000 shares, it is stated that all but 2,500 are owned by the controlling interest. The N.S.T. & P.Co. has issued \$2,250,000 of bonds, \$1,500,000 of preferred stock and \$2,500,000 of common stock, part of which is being offered on the New York and Boston markets through Stone & Webster, Lee, Higginson & Co., and Potter, Choate & Webster. The bonds, which bear interest at 5% and are redeemable in 1946, are being offered at 95½; and 6% cumulative preference stock is being offered at par with a bonus of three shares of common stock for every 10 shares of preferred stock. Data furnished by President Robert, in a letter to the underwriters, show a new high record of earnings in the 12 months to Oct. 31, 1916, when gross earnings were \$759,513 and net from operation \$342,897. After allowing for fixed charges the company's surplus before dividends is given as \$230,397, against \$90,000 required for dividends on the \$1,500,000 preferred stock. This would leave a surplus of \$140,397 for the new common, equal to earnings at the rate of 5.6%.

In addition to the Halifax Tramway Co. properties, the company has taken over the Gaspereaux hydro electric proposition, originally owned by the Nova Scotia Light & Power Co., and it is said that the survey work on this hydro electric development will be placed in hand at once. The new company proposes to engage additional experts to thoroughly study the tramway, light and power requirements of the district and to inaugurate such improvements as may be found necessary to meet every demand and provide for ample future development. The Gaspereaux plant will, it is estimated, develop 12,500 h.p.

In connection with the improvement of the existing plant it is reported that a section of the new boiler equipment being installed at the power house is now in operation, as well as the new 4,000 h.p. turbine, and it is expected that a new and modern switchboard will be completed and placed in service in February. The new gas plant is rapidly approaching completion and will be in operation by the end of February. Extensive construction of gas mains is being proceeded with during the winter, and practically all streets in the newer sections of the city will be laid with gas mains by the spring.

## Signal Installation on Toronto Civic Railway.

The City of Toronto has had a signal installation made at the grade crossing of the Toronto Civic Ry. and the Toronto Suburban Ry. at Lansdowne Ave. and Davenport Road. Both roads are electrically operated from overhead trolley. The Toronto Civic Ry. at that point is a newly constructed double track line, and approaches from the north on a down grade the Toronto Suburban Ry.'s single track crossing. The signal system was designed to protect southbound movements on the down grade on the Toronto Civic Ry. and movements in either direction on the single track Toronto Suburban Ry., the principal features of which are as follows:—

Two low voltage d.c. operated model 2-A upper quadrant, semaphore indication signals are located on the Toronto Suburban Ry., one on each side of the crossing, and distant 80 ft. from it, governing movements over the diamond. One low voltage signal of the same type governs movements on the Toronto Civic Ry. southbound down grade track, located 270 ft. from the diamond, and adjacent to a derail mechanically operated from a style D dwarf machine. All signals stand normally clear in the 90° upper quadrant position and operate in two positions only, from horizontal to 90°. An electric lock is provided on the derail lever, preventing the closing of the Toronto Civic Ry. derail when a movement is being made over the crossing on the Toronto Suburban Ry. Single pole double throw switches are installed at each signal on the Toronto Suburban Ry., controlling the semaphore on the Toronto Civic Ry. and electric lock on derail lever. Three normally open trolley contactors were used, two on the Toronto Suburban Ry., located 20 ft. ahead of the semaphores, and one on the Toronto Civic Ry., 100 ft. beyond the crossing, the function of all being to automatically restore the system to normal condition, that is, all signals clear and derail unlocked after the passage of cars over the diamond. Model 9 d.c. 1,000 ohms relays are used to control the position of signals on both roads, operated as stick relays, and are normally energized through the stick contact, keeping all signals clear and derail lever unlocked.

The operation of the system is as follows:—The conductor of a southbound Toronto Civic Ry. car, finding the semaphore at the derail clear, closes the derail point by means of the style D dwarf machine, and in so doing breaks the control of signals on the Toronto Suburban Ry., placing them in the stop position. The car then proceeds across the dia-

## British Columbia Electric Railway's Annual Report.

Following is the director's report for the year ended June 30, 1916:

The following charges have been made against revenue account for the year:—

Provision for renewals maintenance	£102,236	19	0
Provision for income tax	10,000	0	0
Addition to capital amortization fund	2,655	13	4
	<u>£114,892</u>	<u>12</u>	<u>4</u>

The net revenue for the year, after making the above deductions, amounts to . . . . . £134,964 2 9

To which is added:

Balance brought forward from last year	6,666	13	5
Amount transferred from reserve fund	70,000	0	0
	<u>£211,630</u>	<u>16</u>	<u>2</u>

And deducted:

Interest on debenture and debenture stock for year to June 30, 1916	£132,771	2	11
Dividends already paid on 5% cumulative preference stock for year to June 30, 1916	72,000	0	0
	<u>204,771</u>	<u>2</u>	<u>11</u>

Leaving, to carry forward to next account, a balance of . . . . . £6,859 13 3

**REVENUE ACCOUNT, YEAR ENDED JUNE 30, 1916.**

Total income	£258,206	10	4
Registration fees	195	8	10
	<u>£258,401</u>	<u>19</u>	<u>2</u>
Renewals maintenance	£102,236	19	0
Directors' fees	998	0	0
Special remuneration of Assistant to Chairman	1,367	0	0
Office rent and salaries, printing and stationery, advertising, general, legal, travelling, audit and agency expenses	5,306	1	1
Income tax provision	10,000	0	0
Trustees' fees	874	3	0
Capital amortization fund	2,655	13	4
Balance	134,964	2	9
	<u>£258,401</u>	<u>19</u>	<u>2</u>

Balance	£134,964	2	9
Balance from last year	6,666	13	5
Transfer from reserve fund	70,000	0	0
	<u>£211,630</u>	<u>16</u>	<u>2</u>

Interest on 4½% 1st mortgage debentures	£9,715	9	2
Interest on 4½% (Vancouver Power) debentures	4,558	10	0
Interest on 4½% perpetual consolidated debenture stock	118,497	3	9
Balance carried to balance sheet	78,859	13	3
	<u>£211,630</u>	<u>16</u>	<u>2</u>

**EXPENDITURE ON APPROPRIATIONS ON CAPITAL ACCOUNT, YEAR ENDED, JUNE 30, 1916.**

Rolling stock	Credit \$ 4,925.07
Track extensions	24,811.31
Lighting and power extensions	38,892.68
Steam plant	Credit 4,265.98
Lands and buildings and bridges	Credit 4,974.38
Electrical machinery	Credit 11,477.39
Extending light and power system	13,905.05
North Vancouver, rolling stock, meters, transformers, and initial installations	Credit 476.92
Sundries	8,205.70
Railway feeders	503.12
Automobiles	5,652.05
	<u>\$65,850.17</u>

In order to make the above dividend payments it has been necessary to transfer £70,000 from the reserve fund. The most determined efforts have again been made by the board and management to curtail expenditure in every direction. Operating and all other expenses have been rigidly controlled. The capital expenditure of the railway and subsidiary companies during the year was \$134,900, compared with \$875,558 in the previous year. The General Manager reports that the property has been well maintained, and none of the economies effected have in any way impaired the efficiency, safety or general upkeep of the plant.

The reduction in the population, the reduced spending capacity of the citizens, the continuance of the unfair competition of jitney cars, together with the greatly increased cost of all supplies, are responsible for the decrease in the revenue. About 35,000 soldiers have left British Columbia for overseas service, of whom probably 25,000 have left the territory served by the company, and a further large number of people more or less directly or indirectly dependent on them have also left. It can safely be estimated that, as compared with 1914, the population served by the company has decreased by 30%. The railway business also continues to suffer severely from the competition of jitney cars. Since Jan. 1, 1916, this competition has been less acute than in the previous year, but it is estimated that these cars are still depriving the company of earnings amounting to approximately \$350,000 a year. The various public services furnished by the company, including the railway service, have been fully and efficiently maintained, but with no improvement in the jitney situation in prospect, the necessity of curtailing the car services has become urgent.

The earnings from freight show an encouraging increase during the year, and this class of traffic promises to become an increasingly profitable part of the company's business. The company's financial position remains satisfactory. In spite of the present adverse situation there are indications of an improvement in commercial and industrial conditions in British Columbia, and with these the company's prosperity is closely bound up. The net earnings for the first four months of the current year show an encouraging increase of over £30,000, and the directors are not without hope that the profits of the current year will be sufficient to cover the debenture interest, and also the dividend on the 5% cumulative preference stock, without further trespassing on the reserve fund. The directors think that the company's financial position justifies the payment of the dividend on this stock for the current year, and a resolution will be submitted to the stockholders approving of this payment being made, and authorizing the directors to draw upon the reserve fund, if necessary, for that purpose. The directors are unable to hold out any hope of the payment of a dividend on the preferred ordinary or deferred ordinary stocks for the current year.

R. H. Sperling, having been granted a commission in the army, has retired from the board, to the great regret of his colleagues. He has accepted the position of adviser to the board, and thus the advantage of his knowledge of the company's affairs, gained as General Manager and in other executive positions, will still be available. Sir W. M. Aitken, M.P., and John Davidson have accepted seats on the board. A resolution will be submitted to the stockholders to increase the number of directors to nine, and, if approved, Sir Wm. Mackenzie, who, on the invitation of the directors, has expressed his willingness to accept a seat on the board, will be elected. He is President of the Toronto Ry., the Toronto Power Co., the Winnipeg Electric Ry., and other large public utility enterprises in Canada, and the directors are desirous of securing for the company the advantage of his wide experience. G. P. Norton and H. G. Brown, who are due to retire at the annual general meeting, and Sir W. M. Aitken, and John Davidson, who retire in accordance

mond, and upon passing under the trolley contactor beyond the crossing automatically closes the control circuit for signals on the Toronto Suburban Ry., thereby again clearing these signals and restoring the system to normal.

When making a move over the crossing on the Toronto Suburban Ry., the conductor, finding the semaphore clear, throws over the single pole double throw knife switch located at the signal, thereby placing the Toronto Civic Ry. signal in the stop position and preventing the operation of derail on that railway. Upon passing under the trolley contactor on the opposite side of the crossing the control circuit for the Toronto Civic Ry. semaphore and lock is momentarily closed, picking up the control relay which will then hold up through its own point from a constant source of power. The semaphore on the Toronto Civic Ry. again clears and the derail lever may be operated to close the derail for a movement over the crossing.

For a movement in the opposite direction on the Toronto Suburban Ry., the same procedure is gone into through the contactor on the far side of the crossing serving to automatically restore the signal on the Toronto Civic Ry. to the clear position and unlock the derail.

Power for restoring all control relays is obtained from the trolley wire through the contactors and a suitable resistance to lower the trolley potential to that required for the relays. Twenty-one cells of 400 a.h. caustic soda type battery are used to supply power for the operation of signals and holding all control relays in the energized position.

The installation was made by the General Railway Signal Co. of Canada, Ltd., Lachine, Que.

### The Toronto City Council and Electric Railways in the City.

The Toronto City Council is applying to the Ontario Legislature for an act which, among other things, affects the city's relationships with the Toronto Ry., the Toronto & York Radial Ry. and the Toronto Suburban Ry. The following powers are asked: To require the Toronto Ry. to build and place in operation during 1917 100 new cars and an additional 100 during 1918, and in default of so doing to pay a fine of \$100 a day for every car less than the said numbers.

To authorize the city to acquire by expropriation or otherwise the portion of the Toronto & York Radial Ry. within the city limits on Yonge St., together with all real and personal property, and all franchises connected therewith; to construct a double line of railway upon Yonge St. from the T. & Y.R.R. southern terminus to the city's northern limits; to borrow money to enable the city to finance the purchase and construction, and to authorize the city to grant running rights over the line to the T. & Y.R.R.

Cleaning old ballast is done by the Kansas City Railways by means of a portable rotary screen made out of an old concrete mixer by substituting a revolving screen for the mixing trough and blades. The screen is 6 ft. long and tapers from 18 in. diameter at the motor end to about 3 ft. at the discharge end. The same gasoline engine that formerly drove the mixer now furnishes motive power for the screen. The machine is mounted on a portable steel-wheeled truck. In view of the present high cost of ballast rock, this device is a money saver.

with the articles of association, offer themselves for re-election. The directors desire to express their appreciation of the very valuable services rendered during a most trying year by the General Manager and other responsible officers, and also of the hearty co-operation of the whole staff.

### Three Rivers Traction Co's Bonus for Motormen.

The Three Rivers Traction Co., which operates a line in and around Three Rivers, Que., has had in force for some little time a bonus system for motormen which is working very satisfactorily. The management has favored us with the following information in regard to it: "Prior to the bonus system being inaugurated, there was an alarming frequency of accidents to pedestrians and teams, and to our equipment, so much so, that the insurance company carrying the risk threatened to cancel it. We then decided that we would try the effect of a monthly bonus to our motormen for good operation, and we said to them that we would give a bonus of \$2.50 a month to each motorman who would show, at the end of each month, that there was no well founded cause for complaint against his treatment of the public, or in his operation of the cars and care of the company's property. The effect of this offering has been very marked, and there was almost a cessation of accidents. The improvement thus started has now been continued about three months. I am satisfied that the offer of the bonus did it. We are very strict in considering a man's record for the month, before allowing the bonus. If he is at fault in any way, he loses it, so that it cannot be considered a regular perquisite. The men know they are obliged to earn it."

**Port Arthur Civic Ry.**—In a review of the Port Arthur, Ont., public utilities for 1916, the News-Chronicle says the number of employes on the Port Arthur Civic Ry. is 55, who were paid during the year \$52,645.20. The revenue from the railway was \$105,901.73. Excellent cars for one-man operation have been provided by remodelling single truck cars, and the article goes on to state: "Every effort possible is being made to conserve the rolling stock, which is now believed to be in better condition than that belonging to any other road in the Dominion. Previously many of the cars and equipment were left exposed to the elements during the year when not in use. To eliminate this condition two metallic sheds were erected at a cost of \$3,300, and now all are stored under shelter. In order to prevent wear and tear on the cars and to give the public a ride from which jars and bumps are absent, the roadbed on the main line from McVicar St. to Bay St., along Cumberland St., is being repaired. During last summer about \$3,000 was spent in this work, which has been completed from McVicar St. to Arthur St. This sum, however, has provided the material necessary for the completion of the work."

**Quebec Ry., Light & Power Co.'s Traffic.**—A Quebec press report says that 7,396,331 passengers were carried on the company's city lines in the month ended Dec. 31, against 6,566,621 in the same period of 1915. On the Montmorency Division 1,200,214 passengers were carried in the six months ended Dec. 31, against 1,043,803 in the same period of 1915.

### Mainly About Electric Railway People.

**D. M. Mawhinney**, formerly with the Winnipeg, Selkirk & Lake Winnipeg Ry., is reported to have been appointed Engineer for Rockwood Municipality, Man., with office at Stonewall.

**C. W. Hartman** has been voted \$250 by the Brantford, Ont., City Council in addi-



G. Gordon Gale, M. Can. Soc. C. E.  
Vice President and General Manager, Hull Electric Company.



W. G. Murrin  
Assistant General Manager, British Columbia Electric Railway.

tion to the \$250 he is paid as a member of the Brantford Municipal Railway Commission, for services as Manager.

**F. W. Whitridge**, President, Third Avenue Ry., New York, who was also a rail-

way lawyer and writer on political economy, died there recently, aged 64, following an operation for appendicitis.

**Ralph M. Reade**, Superintendent, City and Quebec County Lines, Quebec Ry., Light & Power Co., contributed a spirited poem, "Make the British Spirit Tell," to a Quebec daily paper recently.

**I. L. Matthews** was re-elected a member of the Public Utilities Commission at Port Arthur, Ont., Jan. 1, and **M. C. Campbell** was elected to succeed **W. P. Cooke**, who was Chairman of the Commission from its inception.

**J. T. Kemp**, General Superintendent, Sherbrooke Ry. & Power Co., having resigned, **F. C. Chisholm** has been appointed Power Superintendent, and **F. X. Couture** has been appointed Railway Superintendent, with offices at Sherbrooke, Que.

**William H. Dinsmore** has been appointed Traffic Superintendent, British Columbia Electric Ry. From Nov. 1, 1909, to Nov., 1915, he was Inspector; Nov., 1915, to Mar., 1916, Chief Inspector, and since Mar., 1916, acting Traffic Superintendent.

**A. D. MacTier**, General Manager, Eastern Lines, C.P.R., has been elected President, Hull Electric Co., succeeding **W. R. Baker**, who resigned from the directorate on retiring from the C.P.R. service, in which he was Secretary of the latter company and Assistant to the President.

**R. H. Sperling**, formerly General Manager, British Columbia Electric Ry., at Vancouver, and latterly Assistant Chairman, and a director, in London, Eng., has resigned those positions on taking a commission in the British army, and has been appointed one of the advisers to the directors.

**F. C. Chisholm**, Superintendent, Southern Division, Southern Canada Power Co. St. Johns, Que., was presented with a gold watch and chain recently by a number of his friends there, on leaving St. Johns for Sherbrooke, where he has been appointed Power Superintendent, Sherbrooke Ry. & Power Co.

**Mrs. M. B. Jones**, widow of the late Capt. J. T. Jones, President, Niagara Gorge Rd., Niagara Falls, N.Y., Gulf and Ship Island Rd., and the Gulfport and Mississippi Coast Traction Co., Gulfport, Miss., has been elected President of the second company, and will probably have charge of the operation of the third one mentioned.

**G. Gordon Gale**, M. Can. Soc. C. E., heretofore General Manager and Chief Engineer, Hull Electric Co., has been appointed Vice President and General Manager, succeeding **E. W. Beatty**, K.C., Vice President and General Counsel, C.P.R., who, however, remains a director. Mr. Gale will continue to attend to the engineering work. He was, prior to 1907, Assistant Engineer, Canadian Rubber Co.'s electrical plant; from 1907 to Nov. 1908, Superintendent of 1909, acting General Superintendent, Power, Hull Electric Co.; Nov. 1908 to same company; 1909 to June 1914, General Superintendent, same company. He is a graduate of McGill University, an associate member of the Institute of Electrical Engineers, and a member of the Canadian Society of Civil Engineers.

**Sir Albert H. Stanley**, who was appointed President of the Board of Trade and a member of the British Cabinet recently, in the reconstruction of the British Government, has since been elected a member of Parliament for Ashton under Lyne, Eng., and, following the usual custom, has resigned all directorships held by him. He was born in England, and entered the service of the Detroit (Mich.)

City Ry. in the horse car days. In 1902 he was appointed Assistant General Manager of the railway department of the Public Service Corporation of New Jersey, in 1903 was appointed Manager, and in Jan., 1907, General Manager. He resigned in that year, on his appointment as General Manager of the Underground Electric Railways, London, Eng. He was Managing Director, London Underground Electric Railways, London United Tramways, Metropolitan District Ry., and the London General Omnibus Co.

**Electric Railway Finance, Meetings, Etc.**

**British Columbia Electric Ry. and allied companies:**

	Jan. 1 to Nov. 1916	Nov. 1915 Nov. 31, '16	Jan. 1 to Nov. 31, '15	Jan. 1 to Nov. 31, '15
Gross	\$604,576	\$562,782	\$2,807,146	\$2,636,479
Expenses	495,039	478,643	2,403,806	2,407,173
Net	109,537	84,139	403,340	229,306

**Cape Breton Electric Co.:**

	Nov. 1916	Nov. 1915	12monthsto Nov. 30, 1916	12monthsto Nov. 30, 1915
Earn'gs	\$34,904.09	\$33,011.80	\$389,650.16	\$350,740.33
Exp.	19,083.26	17,789.98	228,544.47	205,579.75
Net	15,820.83	15,221.82	161,105.69	145,160.58

**Detroit United Ry.**—Shareholders have been notified that at the annual meeting to be held in Detroit, Mich., Feb. 6, they will be asked to authorize the increase of the capital from \$12,500,000 to \$25,000,000. The object is to raise funds for the general improvement and betterment of existing lines and for the building of a number of extensions. The company owns the Sandwich, Windsor & Amherstburg Ry. in Canada.

**Edmonton Radial Ry.**—In a recent interview, Commissioner Harrison, who has charge of this line for the Edmonton, Alta., City Council, is reported to have said: "It would be well if the public, just for once, would look upon the railway in the light of a private enterprise, and see how it worked out. Take November, for instance, the street railway, working as a private company, could have paid 4% on its capital investment and still had a little to spare. The capital investment is \$3,000,725.76, and the yearly interest at 4% would amount to \$120,029.13, meaning a monthly charge of \$10,002.42. Other monthly charges would be as follows: Maintenance, \$3,607; operation, \$16,747.65; power charges, \$8,004; depreciation, \$2,154.44; total, \$40,516.38. Deducting this amount from the November receipts leaves \$379.77 to the good, and makes an excellent showing and example of the working of the utility, supposing that it was in private hands and not municipally owned, which forces the placing aside of payments into the sinking fund."

**Guelph Radial Ry.**—A dividend at the rate of 4½%, totalling \$7,680.39, for 1916, has been paid.

**Hamilton St. Ry.** earnings for 1916 were the greatest in its history, \$706,739, against \$569,694 for 1915. The city's percentage for 1916 was \$56,543, against \$45,576 in 1915.

**Kitchener & Waterloo St. Ry.**—V. S. McIntyre, Superintendent, reported to the Kitchener, Ont., Light Commission, Jan. 11, that during Dec., 1916, the passengers carried numbered 119,035, the largest number carried in the same month since the council took over the line. The net profit for Dec., 1916, was \$993.

**Montreal Tramways Co.**—An issue of \$2,000,000 first and refunding 5% gold mortgage bonds has been placed on the market at 96½ and interest. The amount

of bonds outstanding at the time of the last annual statement was \$13,335,000. Capital expenditure amounting to about \$1,000,000 had been incurred up to June 30, which this issue will cover, and it will also provide for capital expenditure incurred since that date.

**Montreal Tramways Co.:**

	Dec. 1916	Dec. 1915
Gross earnings	\$615,448	\$541,162
Operating expenses, taxes, etc.	376,123	319,041
Net earnings	\$239,325	\$222,121

**Saskatoon Municipal Ry.**—The following figures have been reported to the Saskatoon City Council for the week ended Jan. 6, 1917, and for the corresponding week in 1916:

	1917.	1916.
Receipts	\$4,042.35	\$3,709.30
Average receipts	577.48	529.60
Number passengers	82,090	73,690
Number passengers daily	11,727	10,526
Receipts to date	\$3,730.70	\$2,906.45
Average number of cars daily	14 2-7	
Average per car	\$40.42	\$42.15

**Toronto Railway:**

	1916		1915	
	City	percentage	City	percentage
Jan.	\$473,784	\$68,847	\$471,226	\$70,486
Feb.	470,704	70,614	440,313	66,047
Mar.	518,555	97,287	488,468	93,141
Apr.	496,172	99,234	467,701	93,540
May	500,516	100,103	468,953	93,790
June	467,086	93,417	450,582	90,116
July	469,845	93,969	449,108	89,821
August	474,824	94,964	447,988	89,593
Sept.	506,621	40,530	489,574	39,166
Oct.	487,954	39,036	461,682	36,934
Nov.	490,049	48,892	472,759	46,305
Dec.	526,795	63,247	501,962	58,715

\$5,822,905    \$910,090    \$5,610,296    \$867,654

The total receipts in 1914 were \$6,052,512, and the city percentage was \$955,740. The receipts for 1914 included \$18,000 from post office arrears from Apr., 1913, to Sept., 1914, the city percentage being increased \$1,800 from this source.

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

	Nov. 1916	Nov. 1915	Jan. 1 to Nov. 31, '16	Jan. 1 to Nov. 31, '15
Gross	\$911,829	\$851,113	\$9,825,053	\$8,793,719
Expenses	474,520	397,333	5,032,010	4,391,382
Net	437,309	453,780	4,793,043	4,402,337

**Winnipeg Electric Ry.:**

	Nov. 1916	Nov. 1915	Jan. 1 to Nov. 31, '16	Jan. 1 to Nov. 31, '15
Gross	\$282,899	\$323,025	\$3,023,170	\$3,122,620
Expenses	181,267	188,067	1,946,412	2,136,092
Net	101,632	134,958	1,076,758	1,086,528

The railway earnings for the year ended Dec. 31, 1916, were \$2,075,343, the percentage to which the city is entitled under its agreement being \$1,767.

**Sherbrooke Ry. & Power Co.'s Absorption.**—It is rumored in Montreal that the Sherbrooke Ry. & Power Co. is about to be absorbed by the Southern Canada Power Co., which is building a transmission line from Windsor Mills to Sherbrooke, Que., and with power purchased from the Shawinigan Co., it will be able to provide a much greater supply of power in the Sherbrooke district, where it is much needed. C. J. McCuaig is President of both the Southern Canada Power Co. and the Sherbrooke Ry. & Power Co. W. C. Hawkins, Vice President and Managing Director, Dominion Power & Transmission Co., Hamilton, Ont., was added to the Southern Canada Power Co.'s board recently.

**Guelph Radial Ry.**—The Guelph City Council is asking the Ontario Legislature to dissolve the present elective board of directors of the G.R.R., and to declare the council to be elected Jan. 1, 1918, and its successors to be directors of the company.

**Quebec Ry., Light & Power Co.**—We are officially advised that the company contemplates building an extension from 3rd Ave. and 5th St., along Beauport Road to the city limits, 1.5 miles. H. G. Matthews, Quebec, is General Manager.

**Electric Railway Track Laid in 1916.**

The statistics of electric railway track laid during 1916, published in our January issue, only require correction in one instance, viz., that of the Edmonton Radial Ry., upon which no new work was done. We have been officially advised that the E.R.R. rents from the Edmonton Interurban Ry 1.13 miles of the track the latter has laid from St. Albert to 124th St. and 18th Ave., paying therefor 8% a year on the cost. The E.R.R. decided to extend its line on Brandon Ave east and west, the idea being to reach Elm Park, a distance of 3,000 ft., but the work has not yet been started. At Brandon St., the E.I.R. line runs straight north, and the proposed extension of the E.R.R. is to run parallel with the G.T.P.R., with the intention of reaching the latter's locomotive house and machine shops, as well as to serve the people of Elm Park.

While the London & Port Stanley Ry. laid a short piece of line on Bathurst St., between Richmond and Ridout Sts., London, Ont., as it will not be connected with the main line east of Richmond St. until the spring, the company does not include it in its mileage.

The Saskatoon Municipal Ry. laid track on the 25th St. bridge, but it is not yet connected with the city system.

Following are revised figures:

	Miles.
<b>Brantford &amp; Hamilton Ry.</b> —	
Market St. to Water St., Brantford	0.25
<b>Calgary Municipal Ry.</b> —	
17th Ave. and 28th St. W. to Sarcee	
Military Camp	3.00
4th Ave. and Centre St. to Sunnyside	0.50
<b>Hamilton St. Ry.</b> —	
Kenilworth Ave. and Burlington St. to Barton St.	0.50
<b>London St. Ry.</b> —	
Egerton St. to West St.	0.41
<b>Quebec Ry., Light &amp; Power Co.</b> —	
C.P.R. Cross'g to St. Charles Cemetery	0.50
5th St. to 4th St.	1.25
3rd Ave. to Abattoirs	0.25
<b>Regina Municipal Ry.</b> —	
C.P.R. Arcola line to 16th Ave.	0.72
4th Ave. to Standard Ave. and Winnipeg St.	0.58
<b>Sarnia St. Ry.</b> —	
St. Clair and Christina Sts. to Clifford and King Sts.	0.50
<b>Saskatoon Municipal Ry.</b> —	
On 25th St. Bridge	0.23
<b>Three Rivers Traction Co.</b> —	
Cap de la Madeleine extension	3.06
<b>Toronto Civic Ry.</b> —	
St. Clair Ave. to C.P.R. tracks on Lansdowne Ave., double track	0.61
<b>Toronto Ry.</b> —	
New entrance to Exhibition	1.91
Yonge St. gap	0.14
Woodlawn Ave. extension	0.04
	2.09
	14.45

The London St. Ry., in addition to the new line above mentioned, laid 2,000 ft. of second track on Dundas St. from the exhibition grounds to the G.T.R. inter-switching track.

The Sandwich, Windsor & Amherstburg Ry. laid 2,200 ft. of entirely new double track line on London St. West, Windsor, replacing a single track line; this, however, does not increase the company's track mileage.

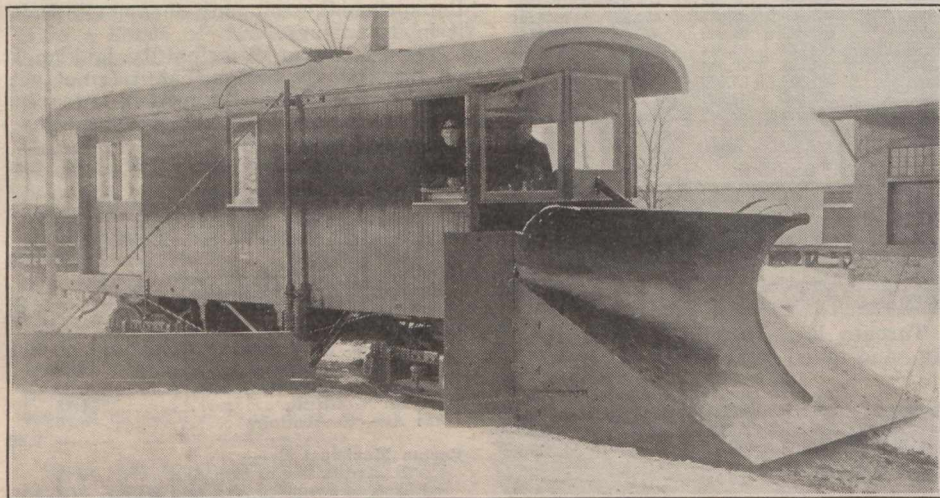
**Toronto Ry. Car Barn Destroyed.**—A fire broke out in the Toronto Ry. car barn, alongside the Don River, on King St. East, Dec. 28, when the sheds and about 150 cars were destroyed. It is stated that the fire was caused by an overheated stove in a trailer car. No official figures are obtainable as to the full extent of the damage, but unofficial estimates give the value of the cars and sheds with contents, anywhere between \$500,000 and \$1,000,000.

### Combination Snow Plough and Freight Car for Three Rivers.

The Three Rivers Traction Co., Three Rivers, Que., has added a combination snow plough and freight car to its equipment. The general dimensions, etc., are as follows:

Length of body .....	28 ft.
Length over end sills .....	29 ft.
Length over all, about .....	38 ft.
Width of body .....	8½ ft.
Width over all, about .....	9½ ft.
Weight completely equipped for winter operations .....	46,000 lbs.

The body is built of wood on a composite underframe, having centre sills of 10 in. channel. The nose plough is built of steel plates and angles, and is made removable. It is raised and lowered by levers operated by a double acting air cylinder inside the car body. The small steel side wings are operated by a hand wheel inside the car body, being held out by a ratchet wheel and a special wooden dog as a safety device. The side wing plough, which is mounted on the right hand side of the car body, is operated by a hand



Combination Snow Plough and Freight Car, Three Rivers Traction Co.

wheel from inside of car body, and is moved in and out by a heavy steel clad ram operated by rack and pinion, and held out with a special hardwood safety dog. The car is mounted on no. 76-E-1 trucks, and equipped with a Westinghouse double end 101-B-2 quadruple motor equipment, with K-6 controllers, also a Westinghouse double end A.M.M. air brake equipment, with an extra reservoir for the plough equipment. There is a folding seat for the motorman, also track sanders, foot gongs, whistles, poling sockets, arm rest, and other small equipment. The underframe is built specially strong, to allow the car to be used to do shunting if required, when not in use as a snow plough. The accompanying illustration shows the car equipped for winter operation. It was built by Ottawa Car Manufacturing Co., Ltd.

The Brantford Municipal Railway Commission, which manages the Brantford, Ont., Municipal Ry., is composed for 1917 as follows: W. R. Turnbull, Chairman; C. H. Hartman and F. J. Calbeak. John Creasor is Secretary.

Two men were committed for trial at Toronto, Jan. 10, for attempting to secure transportation by fraud on Toronto Ry. cars. The conductor, in collecting fares, thought that two tickets placed in the fare box looked rather flimsy and found that one ticket had been split and an attempt made to pass it as two tickets.

### Vancouver's New Jitney Regulations.

After considerable discussion at several meetings of the Vancouver City Council, the bylaw as to the operation of jitneys in the city was amended in a number of details and finally passed Jan. 6. The original bylaw was passed early in 1914, and was amended June, 1915. The following are the important amendments finally assented to: Jitney licenses, without which no auto can operate as such, are increased from \$25 to \$30 for all 5-passenger cars. Jitney drivers' licenses are increased from \$2 a year to \$5. Applicants for jitney driver's license must give, in addition to their qualifications and description, three recommendations as to their character; two from ratepayers and one from the police. No applicant must be under 21 years of age. Jitney drivers must pass a medical examination as to their physical fitness, eyesight, etc., and also a mechanical examination as to their knowledge of their car, and their ability to drive. Jitney drivers

tain it in use. Jitney drivers, when securing their license, shall designate the fixed route on which they intend to operate and shall receive a permit from the license inspector to operate on such of the following routes as they select: No. 1—Grandview, from Twelfth Ave. east to Alma Road West, via Commercial Drive, Venables, Vernon, Hastings, Granville and Fourth Ave. No. 2—Fairview belt line as at present. No. 3—Twenty-fifth Ave. to English Bay, via Main, Hastings, Granville, Robson, Denman and Davie Sts. No. 4—Hastings Park to English Bay, via Hastings, Granville, Davie, Denman and Robson Sts. All jitneys must complete their routes, either one way or the other, but a driver shall have the privilege of taking a short cut to the terminal point, providing he proceeds in the same general direction.

The amendments were not very heartily received by the jitney men, and several meetings were held to discuss their effect upon the traffic and the action which the British Columbia Electric Ry. had taken in bringing about the amendment was criticized. The jitney men, however, on Jan. 12, decided to take up their licenses, select their routes and co-operate with the city authorities in carrying out the bylaw.

### Cars for Sandwich, Windsor and Amherstburg Railway.

The S.W. & A.R., Windsor, Ont., is adding to its rolling stock 2 cars with the following general dimensions:

Length over bumpers .....	43 ft. 7¾ in.
Length over dashers .....	42 ft. 7¾ in.
Length over body .....	30 ft. 10¼ in.
Length of rear platform .....	5 ft. 7 in.
Length of front platform .....	6 ft. 2 in.
Width front door opening between posts .....	24 in.
Width rear door opening between posts .....	3 ft. 6 in.
Width over side sill plate .....	8 ft. 2 in.
Width, extreme .....	8 ft. 4 in.
Height bottom of sill to top of roof .....	8 ft. 5 in.
Height rail to bottom of sill .....	2 ft. 9¾ in.
Length of cross seats .....	35 in.
Width of aisle .....	23½ in.
Seating capacity .....	46

They will be of the single end type and standard steel frame construction, with resistant post construction, the bodies to have plain arch roof and double trucks of 51-E-1 type, with 33 in. diameter wheels. The seats will be standard, sanitary type; upholstering in rattan; 3 illuminated type of signs in each car, one in front right hand vestibule sash, in upper part, and one at each side of body and arranged in an upper sash; hand brake at front end, operated with 17 in. diameter horizontal brake wheel placed on right hand side of front platform; headlining of ¼ in. thickness full length of car body lengthwise, and from advertising moulding to advertising moulding crosswise; safety tread at front and rear steps. On all side windows, in connection with sash arrangement, the wire mesh screen will be attached to bottom rail of sash, and this screen will automatically close opening when sash is raised. At rear end of car signal lamps will be installed. The front end will be equipped with Trolley Supply Co.'s arch head light.

The Great North Western Telegraph Co. has opened offices at Grand Beach and Victoria Beach, Man.; Brule and Lanfine, Alta., and Chu Chua, B.C., and has closed its offices at Abenakis Springs Hotel, Capucins, Dunham and Little Metis Light-house, Que.; Portland, Ont.; Oakland, Man.; Errington and Rosebud, Alta.; and Louis Creek, B.C.



## Electric Railway Projects, Construction, Betterments, Etc.

**Brantford Municipal Ry.**—We are officially advised that while there is under contemplation the building of an extension of between two and three miles, it is very doubtful if it will be done this year. The principal reason for this is the difficulty of securing rails.

**Edmonton Radial Ry.**—Superintendent Moir laid an estimate before the Edmonton, Alta., Public Utilities Commission, Jan. 10, for a projected extension of the Bonnie Doon car line to 95th Ave., as follows: Ties, \$375; 6,000 ft. of 60 lb. rails, \$3,000; 30 poles and brackets, \$150; grading, labor and ballast, \$650; spikes, bolts and bonding, \$300; total, \$4,475. If the extension should be built another car would have to be purchased to give the same service as at present. Consideration was postponed until the estimates for the year are made up. (Jan., pg. 30.)

**Guelph Radial Ry.**—We are officially advised that the company has recently completed the placing of gas-welded bonds on a mile of track. Orders have been placed for 6,000 ft. of 80 lb., 7 in. high Lorrain section 335 steel rails for early delivery. This will be used to relay 3,000 ft. of track on Ogilvie St. A. H. Foster is Manager. (Oct., 1916, pg. 425.)

**The Greater Winnipeg Waterways District Commission** has under consideration a project for building an electric railway to Transcona, Man., but we are officially advised that no decision has been reached upon the matter. (Jan., pg. 19.)

**Hamilton St. Ry.**—The Kenilworth Ave. loop line was put into regular operation Jan. 1. The King St. West cars run along Burlington St. to Kenilworth Ave., thence along that avenue to Barton St. and back. (Jan., pg. 30.)

**Hull Electric Co.**—We are officially advised that the only work contemplated for 1917 is the laying of 8,660 ft. of second track and the building of a 4,800 ft. loop line. A press report credited the company recently with having decided on building two miles of new line. (Dec., 1916, pg. 503.)

**London & Port Stanley Ry.**—We are officially advised that while a small length of track was laid between Richmond and Ridout Sts. on Bathurst St., London, Ont., in 1916, it has not been connected up with the main line east of Richmond St. The work is expected to be finished early in the spring. (Jan., pg. 30.)

**Peterborough.**—The Peterborough City Council is applying to the Ontario Legislature for power to declare the Peterborough Radial Ry. a public utility in the event of the city acquiring the property and franchises; to authorize the borrowing of money to pay for the same and to give the Public Utilities Commission power to take over and operate the railway. (Oct., 1916, pg. 421.)

**Quebec Ry., Light & Power Co.**—Track laying on the Limoilou extension is reported to be completed and a temporary service was started Jan. 8. The cars run up 3rd Ave. and 18th St. to Charlesburg Road and connect with the Stadacona line. (Jan., pg. 30.)

**St. John Ry.**—It is generally understood that the company has purchased the Victoria wharves and maritime warehouses at St. John, N.B., which they have hitherto held under a long unexpired lease. The company is tearing down certain of the Worden buildings thereon,

owing to them being in a dangerous condition. It has not been announced what use will be made of the property. (Jan., pg. 30.)

**Toronto Civic Ry.**—The new car line on Lansdowne Ave., 0.61 mile long, was placed in operation Jan. 16. Two cars are being operated on it, giving a six minute service. The line extends from the St. Clair Ave. line south to the C.P.R. track.

The city now operates five lines, having a total length of practically 20 miles, as follows: Gerrard St., Danforth Ave., St. Clair Ave., Bloor St. and Lansdowne Ave.

**Toronto Ry.**—It is expected that the company will start the Pape Ave. line about April 1. This line is to be built by direction of the Ontario Railway and Municipal Board from Gerrard St., northerly along Carlaw Ave. to Guelph Ave., easterly along Guelph Ave. to Pape Ave., and northerly along Pape Ave. to Danforth Ave. A Y is to be put in at the intersection of Pape and Hazlewood Aves. The line is to be completed and ready for operation July 1. (Apr., 1916, pg. 155.)

**Toronto Suburban Ry.**—The Ontario Legislature is being asked to extend the time for the completion of the Lambton-Guelph line now under construction, and of the extensions authorized to be built under the company's various acts.

**Toronto Suburban Ry.**—The Toronto City Council is applying to the Ontario Legislature for authority to enter into an agreement with the company for an alternative route in substitution for the one on Davenport Road easterly from Bathurst St., as covered by the agreement of Sept. 4, 1899. The time originally set for the construction of this section of the line by the company, expired Jan. 1, and prior to that date the company was proceeding with the construction, as first planned. Certain residents along the route objected to the construction of the line, and waited on the city council, suggesting another route on Bridgman St. and also that while the matter was under consideration, the council should grant the company a further extension of time to July 1. This was agreed to, and at the council's request the company suspended operations on the construction of the extension.

**Transcona Electric Ry.**—Application is being made to the Manitoba Legislature for the incorporation of a company with this title to build a railway from Winnipeg to Transcona and throughout the Town of Transcona. Moran, Anderson & Guy, Winnipeg, are solicitors for the applicants. G. Anderson, K.C., a member of the firm, is Counsel for the Winnipeg Electric Ry. Local reports state that it is expected to start construction work early in May and to have the line in operation by the autumn. The plans are said to be prepared and all ready for proceeding with the work. It is further stated that an hourly service will be given between 6 a.m. and midnight, but that it has not been decided whether the cars will run into St. Boniface only, or right through to Winnipeg. Jan., pg. 30.)

**The Sherbrooke Ry & Power Co.,** Sherbrooke, Que., may, according to a press report, suspend its electric railway service, wholly or partially, for a time, to release power for pressing needs of munition manufacturers.

## Ontario Hydro Electric Radial Railway Bylaws.

Voting took place, Jan. 1, in the municipalities concerned in the proposed construction of radial electric railways by the Hydro Electric Power Commission of Ontario, between Port Credit and St. Catharines, and between Welland and Bridgeburg. The first named line, which it is proposed to build, is intended to connect at Port Credit with the proposed through line from Toronto to London, and to run through Hamilton to St. Catharines and eventually to Niagara Falls. Of the 16 municipalities voting on the bylaws to authorize the commission to proceed with the construction, 13 voted in favor, and in three, Hamilton City, Nelson Township and Saltfleet Township, the bylaw was defeated. The voting in Hamilton was 3,192 for and 3,626 against; in Nelson Tp., 90 for, and 101 against; and in Saltfleet Tp., 104 for, and 241 against. The estimated cost of the construction of the first named line is \$11,360,363, and of the second, \$2,208,717. It is expected that arrangements will be made for the resubmission of the bylaw to the ratepayers in Hamilton, Nelson Tp. and Saltfleet Tp. at an early date, but it is said that no actual move towards construction will be made until after the war.

Following is a record of the voting in the various municipalities for the respective bylaws.

Port Credit-St. Catharines Line.		
	For.	Against.
Toronto Tp. . . . .	237	125
Trafalgar Tp. . . . .	138	43
Nelson Tp. . . . .	90	101
East Flamboro Tp. . . . .	144	117
Barton Tp. . . . .	416	374
Saltfleet Tp. . . . .	104	241
North Grimsby Tp. . . . .	194	140
Clinton Tp. . . . .	150	59
Louth Tp. . . . .	298	7
Grantham Tp. . . . .	382	95
Grimsby Village . . . . .	159	59
Beamsville Village . . . . .	165	23
Oakville . . . . .	268	37
Burlington . . . . .	250	123
Hamilton . . . . .	3,192	3,626
St. Catharines . . . . .	1,049	375
Totals . . . . .	7,236	5,545
Welland-Bridgeburg Line.		
Crowland Tp. . . . .	191	80
Humberstone Tp. . . . .	328	91
Bertie Tp. . . . .	538	114
Humberstone Village . . . . .	146	4
Port Colborne . . . . .	216	3
Fort Erie . . . . .	78	8
Welland . . . . .	452	85
Bridgeburg . . . . .	148	7
Totals . . . . .	2,097	392

The St. Catharines City Council, in view of the adverse vote in Hamilton, has requested the Hydro Electric Power Commission to advise whether the proposed railway could be constructed from Port Credit via Burlington Beach to St. Catharines, thus avoiding passing through Hamilton, and as to what saving in the cost of construction and operation would be effected by adopting such route; also as to the saving of time and reduction of rates.

**Fares in Port Arthur.**—The Port Arthur, Ont., Public Utilities Commission devoted some time, on Jan. 9, to the consideration of fares on the Port Arthur Civic Ry., which have been causing some controversy of late. Chairman A. E. Wideman and Commissioner Rapsey were appointed a committee to investigate the whole matter in conjunction with the manager of the railway. It was pointed out that the passengers carried daily averaged one half of the population, and it was stated that while the average fare received was 3.22 cents, it cost 7.62 cents to carry each passenger.

### Electric Railway Notes.

The Montreal Tramways Co. has ordered 25 motor cars and 25 trailer cars to be built in Philadelphia.

The Montreal and Southern Counties Ry. has ordered 3 motor and 3 trailer cars from Ottawa Car Manufacturing Co.

The Port Arthur, Ont., Public Utilities Commission has declined to grant the Salvation Army certain free advertising privileges on the electric railway cars.

The Guelph Radial Ry., owned and operated by the city of Guelph, Ont., has advanced its conductors' and motormen's wages 1c an hour, making them as follows: 1st year, 22c; 2nd year, 23c; 3rd year, 24c.

The British Columbia Electric Ry. announces that as the result of the experiment tried during last summer clear glass will be substituted for the opaque glass at present in use on front windows of its cars.

The Vancouver City Council is applying to the British Columbia Legislature for power, among other things, to enable it to make a distinction between taxi-cabs and jitneys as to license fees, and to enable it to operate motor busses.

The recent fire at the Preston Car & Coach Co.'s works, Preston, Ont., destroyed among other rolling stock: 2 suburban electric cars for Toronto Suburban Ry., 2 suburban electric cars for Niagara, St. Catharines & Toronto Ry., and 1 gas electric car.

The Saskatoon, Sask., City Council has under consideration a suggestion by Commissioner Yorath that the city, owing to the largely increasing cost and the inability of manufacturers to fill orders on short notice, undertake the building of cars for the Saskatoon Municipal Ry.

One of the first acts of the Nova Scotia Tramways & Power Co.'s directors on taking over the Halifax Electric Tramway Co.'s property, Jan. 10, was to authorize a 10% increase of wages of conductors and motormen, to date from Jan. 1. The wage agreement with the men had until May 1 to run.

The Hamilton St. Ry. reported recently that it was several men short of the number necessary to maintain a normal street car service. In addition to the shortage of young men going into the service, the company is losing men who have been with it several years, who are going to other and at present better paid lines of work.

The Lake Erie & Northern Ry., on Jan. 22, put a new time table into effect, under which the first northbound train leaves Brantford at 7.47, instead of 8 a.m., and the first southbound train at 7.50. There is no other alteration of the northbound trains, but all southbound trains except the first leave Brantford at 15 minutes before the hour, instead of on the hour as previously.

The Edmonton, Alta., City Council had soldiers' wives and children transported free on the Edmonton Radial Ry. for a Christmas entertainment. Eight special cars were in operation for five hours on the service at cost of about \$120. Superintendent Moir has asked the Commissioners whether the E.R.Ry. is to be charged with this or whether it is to be paid out of some other city fund.

The Quebec Ry., Light & Power Co. has put in operation a reduced fare on its line from Sillery into Quebec. The straight fare will be 7c, but 15 tickets will be issued for \$1, and there will be the

usual transfer privileges. The old fare was 5c from Sillery to Maple Ave., and city rates inside the limits, making the total fare a little over 9c, where city tickets were used and 10c otherwise.

The British Columbia Electric Ry. has erected two electrically illuminated maps, each 5 x 10 ft., at the approach to its interurban station on Carroll St., Vancouver, showing in colored lights the various lines operated by the company. One map shows the lines between Vancouver and Steveston and Chilliwack, with the New Westminster connections, and the other shows the city lines with outside connections.

City Commissioner Harrison reported to the Edmonton, Alta., Board of Trade recently that an effort had been made to manufacture brake shoes for street cars at the city foundries, but it had been found that they were either too hard, so that they made unreasonable wear of the car wheels, or that they were too soft. The Board of Trade proposes to have another test made to introduce the manufacture into the city.

The Mayor of Vancouver, in the course of his inaugural address to the City Council on Jan. 15, said: "As the agreement with the B. C. Electric Co. expires at an early date, it is imperative that this year's council formulate a definite policy in this connection, the preliminary steps having been taken by last year's council, in the acquirement of certain options on power sites and by applying for the necessary legislation."

The Hamilton & Dundas St. Ry. has entered into an agreement with the Toronto, Hamilton & Buffalo Ry. for making a connection between the two companies' lines between Hamilton and Dundas, and for the operation of the T.H. & B.R. over the H. & D. St. Ry. tracks into Dundas, for freight purposes only. The agreement is to run for 50 years, and because it is for that period and not for one of less than 21 years, it is necessary to have it ratified by act of parliament.

The Edmonton, Alta., City Council has authorized application to be made to the Alberta Legislature for power to pass a bylaw to regulate the jitney traffic in the city. The city's Public Utilities Commission desires to have the jitney traffic restricted to streets upon which the Edmonton Radial Ry. does not operate, and as a basis of framing a bylaw the regulations at present in force in Calgary, Alta., were on Jan. 13, recommended for adoption.

The Montreal & Southern Counties Ry. has ordered 3 motor and 3 trailer passenger cars from the Ottawa Car Manufacturing Co. They will be 55 ft. long over buffers, and 8 ft. 1½ in. wide, equipped with lavatory accommodation, water coolers, hot air forced draught heaters, etc. The electrical equipment will be Westinghouse 306 interpole motors with H. L. multiple control, and the air brake will be Westinghouse AMM type. The governors on all cars will be operated through a master governor on the leading car of each train.

Port Arthur Civic Railway is managed by the Port Arthur Public Utilities Commission, which is composed of: A. E. Wideman, chairman; I. L. Matthews, G. H. Rapsey, M. C. Campbell and Mayor Cowan. At the civic elections in January, I. L. Matthews was re-elected a member of the commission, and M. C. Campbell was elected to succeed W. P. Cooke, who was chairman of the commission from its inception in January, 1915.

### United States Electric Railway Earnings, Etc.

The American Electric Railway Association has prepared the following comparison of statistics for the years ended June 30, 1915 and 1916:

		Increase over 1915, 1916. per cent.
Operating revenue . . . . .	\$208,641,000	3.47
Transportation revenue . . . . .	202,822,000	3.54
Other ry. operating revenue . . . . .	5,813,000	.87
Operating expenses . . . . .	126,352,000	2.40
Net earnings . . . . .	82,289,000	5.15

**Reduction of Speed on Galt, Preston & Hespeler St. Ry.**—The Ontario Railway and Municipal Board, as a result of a visit paid to Kitchener by Vice Chairman A. B. Ingram, passed the following order, Jan. 2, re accident in the city of Kitchener on Galt, Preston & Hespeler St. Ry. and Preston & Kitchener St. Ry. Co.'s line, resulting in the death of Jas. Gancie on Nov. 18, 1916: "Upon consideration of the company's report and of the finding of the coroner's jury, and the board having investigated the facts in connection with the accident, and having inspected the railway in Kitchener and its operation, the board orders that no car of the said companies be operated at a speed exceeding 15 miles an hour between the southerly limit of the city of Kitchener and the point where the companies' line connects with the Kitchener & Waterloo Ry. Co.'s line."

**The Ottawa Electric Ry. Bulletin,** Christmas number, was a considerably enlarged issue, containing among other matter a Christmas greeting from the President, T. Ahearn; portraits and biographies of "Pioneers of the Electric Railway Industry in Canada," viz., T. Ahearn, W. Y. Soper and J. D. Fraser, who are the company's President, Vice President and Secretary-Treasurer respectively; a historical sketch of the company, an illustration of one of its first sweepers in 1891; portraits and biographies of old timers of 1891, "still in the service and going strong," and portraits of the company's contingent in the 207th Battalion, C.E.F., besides a lot of other interesting matter.

**Overcrowding on Toronto Ry. Cars** is again occupying the attention of the city council. The Medical Officer of Health was instructed to proceed against the company for endangering the public health by overcrowding its cars, and he instructed his staff to obtain evidence to enable a prosecution to be undertaken, after which a charge was laid and the case remanded by the police magistrate. The question of overcrowding has been before various relays of city councils in Toronto for many years, and some hope is still entertained that some day a bright idea on the subject may enter the minds of those in authority, which, when put into practice, would cause overcrowding to cease.

**The Toronto Ry. was sued** recently by M. J. Quinn, Manager, National Equipment Co., Toronto, for \$5,000 for alleged injury to his reputation and expense incurred, respecting a charge in the local police court of disorderly conduct, he having advised some women who were injured when alighting from a street car not to give their names to the conductor. He claims that some years ago, while acting for the Ontario Railway and Municipal Board, he reported adversely on certain fenders used on the company's cars, and that since that time he has been a marked man. The jury awarded him \$528.25 damages.

# Marine Department

## The Dominion Wreck Commissioner and the St. Lawrence Pilots.

At the conclusion of an investigation at Montreal, recently, the Dominion Wreck Commissioner, Capt. L. A. Demers, made the following statement: The court at this juncture wishes to comment favorably on the work of pilots, both of the Montreal and Quebec Districts, in connection with last season's work, which has been free from serious accidents, and advises them that there must be no relaxation in fulfilling their responsibilities. The season is not yet ended. The reputation of the St. Lawrence route must be without a stigma. Masters of vessels look to the pilots as their advisers, and practically pin their faith on them, hence it devolves on pilots to execute all prudence and prevent damage and delays, which are as important almost, even if no damage is sustained by the vessels. This court has a mandate to fulfill, and it is to penalize those who are found to be lacking in performing their duties in a practical common sense manner. The St. Lawrence is well buoyed, lighted and equipped, and there is nothing wanted which modern ingenuity, with a view to facilitating navigation, could devise. The pilotage is efficient, and sober and intelligent men form the association. Yet with all this, there must not be a moment of forgetfulness or inattention found in the pilots' actions. Varying climatic conditions must be expected and met with foresight, judgment and proper action. The court is deeply imbued with the idea that there must be no cause for reflection to be made on the administration and composition of the men engaged in bringing vessels to our ports, and trusts that henceforth pilots will be thoroughly awake to their responsibilities.

## Long Sault Development Co's Project.

Canadian Railway and Marine World for January referred to the final quashing of this project, the United States Supreme Court having dismissed the company's appeal against the New York courts' annulment of its franchise, and mention was made of the fact that the project had been persistently fought at every stage by the Dominion Marine Association and the Shipping Federation of Canada, on the ground that it would interfere considerably with the safe navigation of the St. Lawrence River. The Dominion Marine Association, particularly, performed very important work in this connection, kept in close touch with what was going on, and lost no opportunity to protest against the proposals as occasion required. Latterly it was not necessary for the association to move in the matter, as it was relying upon no progress whatever being made without the assent of the Canadian Government and the International Joint Commission. Our attention has been called to the fact that the Dominion Conservation Commission also took a very active part in opposing the project from the commission's inception in January, 1910. In 1913 the commission published a report of nearly 400 pages, including all available data respecting the company and its project, and subsequently assisted the State

of New York at every stage of its fight with the company. When the case was heard by the U. S. Supreme Court in April, 1916, the Conservation Commission had a shorthand reporter present and procured a stenographic report. When the court ordered a rehearing, the commission had the only record of the arguments and furnished the State of New York with a copy. The order for a rehearing was totally unexpected, and the State of New York would have been much inconvenienced had a report of arguments by counsel been unavailable.

## Lake and Rail Rates Over Canada Atlantic Transit Co's Line.

The Interstate Commerce Commission gave the following decision at Washington, Dec. 11:

At the close of navigation on the Great Lakes for the season of 1915 the operation of the lake and rail rates on cotton and cotton linters, named in a tariff of the Chicago, Rock Island & Pacific Ry. Co., and therein made applicable in connection with all the lake lines, was superseded, for the closed season, by a supplement in due form properly filed. On Mar. 17, 1916, another supplement to the same tariff was filed to take effect on three days notice under the authority of rule 12 (b) of Tariff Circular 18-A relating to the restoration of rail and water rates so temporarily withdrawn. While on its face this supplement cancelled the previous one of Nov. 30, 1915, specific provision was made for the restoration of the rates only in connection with the Lehigh Valley Transportation Co. It did not purport to cancel the rates theretofore applicable over the other lake lines named in the tariff; and under the commission's rules the cancellation of the other routes could legally be effected only upon 30 days notice. Although the railway company subsequently was granted permission, on one day notice, to restore the rates theretofore applied in connection with the Canada Atlantic Transportation Co., that course was not followed, because of a disagreement between the two companies respecting divisions. Finally another supplement was filed, to become effective on May 15, 1916, in which the Rock Island Ry. sought to eliminate the transit company from participation in its tariffs. The effectiveness of this supplement, upon the protest of the latter company, was suspended under an order by this commission.

The respondent contends that the lake and rail rates, having been suspended in the fall of 1915 and not having been restored in the spring of 1916, the only result that could have been effected by the supplement of May 15 was the elimination of a tariff anomaly, the tariff itself naming the transit company as a party to the lake and rail rates while the two prior supplements thereto indicate that the rates do not apply in connection with that line. This is not a correct view of the effect of the tariff situation disclosed on the record before us. As the supplement of Mar. 17 did not make specific provision for the cancellation of the route in connection with the transit company, and could do so only upon 30 days notice, its effect was to restore the rates formerly applicable in connection with that route. It follows, therefore, that the supplement

proposing to eliminate the Canada Atlantic Transit Co., if permitted to have become effective, would have cancelled the rates then in effect in connection with that line. As no reason has been offered of record for this course other than the failure of the railway company and the transit company to agree upon the divisions, we find that it has not been justified as required by law, and the respondent and its receiver will therefore be required to cancel the supplement in so far as it proposes to cancel the application of the respondent's lake and rail rates over the route in question.

The commission ordered that the Chicago, Rock Island and Pacific Ry. and its receiver be required to cancel said schedules, on or before Feb. 12, 1917, in so far as they propose the elimination of representation by the Canada Atlantic Co. in Chicago, Rock Island & Pacific Ry. tariff I.C.C. no. C-9896.

## The Dominion Wreck Commissioner and His Critics.

The stranding of the British s.s. Middleham Castle on Matane Reef, Que., July 27, was a comparatively small affair, and the enquiry into the causes leading to it, held at Montreal, Aug. 3, by Capt. L. A. Demers, Dominion Wreck Commissioner, was not marked by anything noteworthy, either in the way of evidence or final judgment. It was held that the master, Capt. Kelly, had been guilty of reckless navigation in unknown waters, but owing to the general circumstances surrounding the case, he was merely reprimanded. Apparently the master was quite satisfied, and from reports was pleased that he had been dealt with so leniently. No sooner, however, had he returned to England, and apparently made complaint to the Mercantile Marine Service Association, than there was a perfect whirlwind of vituperation, either by the association or by the Liverpool Journal of Commerce on the association's behalf, directed at the Wreck Commissioner's report, his method of dealing with cases in general, and the St. Lawrence route and everything connected with it. For such a trivial case, as the one mentioned, the expenditure of printer's ink alone is an extravagance. While the case was being brought into so much prominence in the Liverpool paper, the association communicated with the Dominion Minister of Marine, and a reply was sent by the Deputy Minister, to which was attached a copy of a report on the case by the Wreck Commissioner, and at the same time a copy was sent to the Journal of Commerce, in answer to the criticism in the paper, as mentioned above. Following is a copy of the Wreck Commissioner's report to the Deputy Minister:—

"Referring to the criticism which has been made by the Journal of Commerce, and to the letter which has been written to the Minister of Marine, by the secretary of the Mercantile Marine Service Association, re Middleham Castle, I may say I do not think the criticisms are justified or based on facts. My condemnation of the action of the master of this vessel was to the effect that his sailing within three quarters of a mile of a coast absolutely unknown to him was a subject for censure; secondly, that provision or steps had not been taken at Syd-

ney to procure a proper chart of the St. Lawrence River. Even admitting the U.S. chart which he had to be a good and acknowledged chart, it was plainly marked on it that there is a buoy at the end of Matane wharf and a bell buoy outside. The weather was hazy, but the master said he could see some distance ahead, and if proper attention had been paid and a good lookout kept, which was necessary under the circumstances, he would have been able to distinguish between a bell buoy and an ordinary can buoy, which is placed at the end of the wharf for the guidance of local craft going in and out of that place. Notwithstanding the fact that he grounded his vessel there, and he saw some influences were driving her in towards the shore, he followed the same procedure after floating his ship, and passed inside of Cock Point buoy, a place where even our smallest coasting vessels do not like to navigate. In my judgment in this case I did not make any reference to the second occurrence, but had his ship come to grief inside of Cock Point buoy and the land I would have dealt with his certificate. It will all go to show that the navigation of this vessel was not carried on according to the proper rules, or with the necessary prudence which is required in the St. Lawrence. Further, the evidence of the mate of this vessel, who holds an extra master's certificate, shows that he stated that had he been master he would have sailed his vessel farther away from the land, and also that he noticed there was an influence drawing them in towards the shore. If anyone navigating a vessel cares to take the trouble to enquire and to read the sailing directions, he will find that there is a current running there which throws objects from the north shore to the south. In view of the above facts I think that the judgment, which was purely and simply a reprimand, cannot be considered as anything but lenient under the circumstances, and all the criticism which has been made as unfounded. It had been repeated to me that the master, Kelly, after receiving the reprimand, stated that he was agreeably surprised to have such a light penalty inflicted upon him. With respect to the charts, I may say I have only to refer to the report from the Transport Officer at Sydney, Capt. Pascoe, who states that no application for charts was made to him by Capt. Kelley, and that he has copies on hand which he has heretofore furnished to transports."

This letter was duly published in the paper mentioned, and the following day a letter was published in the same paper, from Thos. Scott, Secretary of the association, as follows:

"Your issue of yesterday contains a copy of a communication addressed to me by the Canadian Minister of Marine, in which Capt. Demers replies to certain criticisms directed by this association against his judgment on the stranding of the s.s. Middleham Castle. The statements of the Wreck Commissioner in his endeavor to sustain his severe censure of the master, had, last Tuesday afternoon, the very patient consideration of my council, who, at the same time, heard the reply of the master to the defence put forward by Capt. Demers. The meeting was quite satisfied, from the evidence before them, that in no way can Capt. Demers' language at the close of the enquiry be justified.

"In forwarding this correspondence to you for publication, this association feels that such a proceeding is not only premature, but indecorous. My council have a

very full answer to each of the Wreck Commissioner's contentions, and it would have been more in keeping with the traditions of a Government department if Mr. Johnson had refrained from publicity until the case had arrived at an indisputable conclusion."

It is stated in this last letter that the council of the association was quite satisfied from the evidence before them, and the master's defence, that in no way can Capt. Demers' language at the close of the enquiry be justified.

Surely the proper place for the master to make his defence is at the enquiry itself, and with all due respect to the council of the association, we may say that we fail to see that the members are capable of forming any opinion on the merits of the case without actual personal knowledge of the scene of the casualty, which is possessed by the court which dealt with the case. The language used by Capt. Demers at the conclusion of the enquiry was, as he states, in the nature of a reprimand, and could in no way be classed as exceptionally severe, seeing the carelessness of navigation, as shown by the master's own evidence. The last paragraph of Mr. Scott's letter questioning the decorum of the Deputy Minister in sending the report to the press would, perhaps, have been written with better grace had the hands of the association been entirely clean in the matter. Would it not be correct to presume that the original criticism appearing in the Journal of Commerce, which caused the Deputy Minister to send the report to that paper for publication, was supplied from the association's office?

**Canada Steamship Lines, Ltd., Finances.**—A general meeting of holders of debenture stock and bonds of the company was called to be held at Montreal, Jan. 30, to consider and pass resolutions, to make an agreement with the Montreal Trust Co. with the object of securing the redemption of Richelieu & Ontario Navigation Co.'s outstanding bonds and the ultimate discharge of the mortgage securing same; and to amend the provisions of the trust deeds of Oct. 8, 1913, and Feb. 11, 1914, securing the 5% consolidated first mortgage debenture stock and bonds of C. S. L., Ltd., by providing that any stock or bonds purchased by the trustees may, in lieu of being kept alive, be surrendered on terms that the company shall not reissue any in place thereof, and that the stock or bonds so surrendered shall continue to be taken into computation for limiting the amount which the company is entitled to issue.

**St. John, N.B., Harbor Improvements Discontinued.**—Work on the harbor improvements at St. John, N.B., covered by contracts awarded to the Norton Griffiths Construction Co., has been discontinued, and no decision has been arrived at in regard to its continuation. These contracts covered the construction of 4,600 ft. of breakwater, which is practically completed; 9,900 lineal ft. of quay walls, on which no work has been done; a dreadnought dry dock, 1,000 ft. long, the excavation for which has been made, and the reclamation of large tracts of land. A considerable portion of the dredging work has been done in the harbor basin and channel. It is stated that the labor problem is one of the contributing causes of the abandonment of the contract. Col. Norton Griffiths, M.P., of England, who is chiefly concerned, has given up all contracting work of this nature, and is devoting himself entirely to work connected with the war.

## Steamship Construction at Port Arthur.

The Port Arthur Shipbuilding Co. has received orders for 6 additional salt water steamships of the Norwegian type, similar to the steamships Blaamyra and Thorjerd, turned out from the company's yards recently. They will be of the following dimensions: Length over all, 261 ft.; length between perpendiculars, 251 ft.; breadth moulded, 43 ft.; depth moulded, 28 ft. 2 in.; carrying capacity, about 3,000 gross tons.

They will be of the single deck type, with poop, bridge and forecabin, steel deckhouse on bridge deck and chart room on top of deckhouse, with navigating bridge. They are being built on the transverse system of construction with two cargo holds and two hatches in each hold. No. 1 hold will extend from collision bulkhead to boiler room bulkhead, and no. 2 hold from engine room bulkhead to after peak bulkhead. The propelling machinery will be located amidships. The double bottom will be 3 ft. deep, extending from collision bulkhead to after peak bulkhead, divided by transverse water or oil tight floors into a number of compartments. Part of the double bottom will be utilized for fuel oil, the remainder of the fuel to be carried in wing tanks, which can also be used for coal. The officers and crew will be berthed amidships on bridge deck, where also will be the mess rooms, galley, pantry, lavatories, etc. The firemen and sailors will have their quarters aft on main deck.

The two main boilers will be of the Scotch marine type, single ended, and arranged abreast. They will be 14 ft. 8 in. diam. by 11 ft. long and will have a combined grate area of 126 sq. ft. Each boiler will have 3 corrugated furnaces, of the suspension type, 42 in. inside diam., and will be fitted for natural draught.

The propelling machinery will consist of triple expansion engine with surface condensers, built-in type, 3 cylinders each, working each on a separate crank placed at an angle of 120 degrees. The slide motion will be of the Stephenson link type. Cylinders 20, 33 and 54 in., with a stroke of 40 in. The average working horse power will be 1,200, maximum 1,300. The high pressure cylinder will have piston valve, the low and intermediate will have double ported slide valves with relief frames, and the low pressure one will have a Lovekin assistant cylinder. The high pressure cylinder will be supplied with a loose bushing of hard cast iron. All cylinders will have relief valves, top and bottom, discharging into the atmosphere. The turning gear will consist of a single cylinder engine, driving through worm gearing, a shaft mounted on sliding cast steel worm. The propeller will be of cast iron, solid section, with four blades. The air pump will be bolted to the back column of the engine.

The steam steering gear will be placed on the main deck in the engine room. There will also be a hand steering gear aft, and 8 x 6 in. steam windlass fitted with hand attachment and friction brakes. All anchors will be of the stockless type, of size in accordance with Lloyd's requirements. To facilitate the handling of the cargo there will be six 7 x 12 in. reversible steam winches, and 6 derrick booms to lift 4 tons each.

The vessels will be fitted throughout with electric light. One 7½ k.w. generator will be fitted in engine room. All wires, with the exception of those in cabins, will be enclosed in conduit, with outlets terminating in watertight fixtures.

**Valetta-Sol Bakken Collision.**

Following is a summary of the judgment by Capt. L. A. Demers, Dominion Wreck Commissioner, concurred in by Commander E. Wyatt, R.N.R., and Capt. R. Jones, as nautical assessors, re the collision of the steamships Valetta and Sol Bakken, near Cape Dogs, in the River St. Lawrence, Oct. 4, 1916.—The court finds that both vessels were to blame, each having violated articles 21, 27 and 29. The evidence was very contradictory, and the court came to this decision on the fact that neither vessel, when collision was imminent, took the action provided for in the articles mentioned. The chief officer of the Sol Bakken was remiss in his duty in not complying with the rules of the road, but as he is a foreigner he cannot be dealt with. The master of the Sol Bakken is exonerated from blame. The pilot, Arthur Paquet, committed a grave breach of discipline in leaving his post, and owing to the fact that he has been, and is now, serving as an officer in the Canadian Army, his license will not be dealt with, but he is fined the maximum amount of \$400, and is to defray the expenses of his travels to Halifax and return to his home. The master of the Valetta is exonerated from blame. The second officer, D. Gillies, for leaving the bridge at a crucial moment and failing to comply with article 21 (note), is severely criticized and reprimanded. Owing to the conditions existing, and the presence of a pilot near him, his certificate will not be dealt with. The pilot, Ernest Bernier, knowing that his vessel was sheering, is found at fault for the casualty, and is fined \$300, and is to defray his own expenses.

**Collingwood Shipbuilding Co., Ltd.—**

Some details of the change of ownership of this company were given in our last issue, when it was stated that a new company would be incorporated. This has now been done, the Collingwood Shipbuilding Co., Ltd., having been incorporated under the Dominion Companies Act, with capital stock of \$2,600,000, and office at Collingwood, Ont. It is authorized to build, sell, own, charter and operate steam and other vessels, wrecking outfits, wharves, docks, piers, dry docks, telegraph and telephone lines on its own lands, wireless telegraph outfits for its own use, steamship and railway terminals and other transportation and storage facilities; to carry into effect an agreement between H. B. Smith, J. W. Norcross and R. M. Wolvin, named the vendors, and W. S. Morlock as trustee, whereby the vendors, as promoters of the company agree to sell the undertaking known as Collingwood Shipbuilding Co., Ltd., incorporated under the Ontario Companies Act, by which they will make a profit in shares of the company.

The Lake Carriers' Association's annual meeting was held at Detroit, Mich., Jan. 18. The report states that 73 lives and 14 vessels were lost last year on the Great Lakes. The ore movements were 64,734,198 tons, against 49,070,478 for 1915, the previous highest year. The grain shipments for the year were 363,999,156 bush., a decrease of 22,166,896 bush. from 1915. The average rate per bush. during 1916 was 4¼c, compared with 2¼c for the year previous. Seventy-one vessels were sold, totalling 683,770 tons, and 59 vessels were reported as under construction for delivery during the current year. W. Livingstone was re-elected President and Chairman of the Executive Committee.

**Atlantic and Pacific Ocean Marine.**

The name of the s.s. Prospective, owned by the Dominion Public Works Department, and registered at Vancouver, B.C., has been changed to Point Hope.

The Cunard Steamship Co. is reported to have two steamships under construction in Great Britain, for service on the Pacific Ocean between Vancouver and the Orient.

Manchester Liners' s.s. Manchester Inventor, which left St. John, N.B., early in January, has been sunk by an enemy submarine. She was of 4,247 tons, and has been operated for some time between Manchester, Eng., and Montreal and St. John.

The Newfoundland schooner Harry Adams, from St. John's to the Mediterranean with fish, is reported to have been torpedoed by the enemy in the Bay of Biscay. The crew were placed in an open boat, and eventually landed at Ferrol, Spain.

The France & Canada Steamship Co. is reported to have chartered the s.s. Newton from the New England Coal & Coke Co., Boston, Mass., at approximately \$100,000 monthly. She will be operated on the company's route between North America and St. Nazaire, France.

The Osaka Shosen Kaisha, operating between Japan and Puget Sound ports and San Francisco, has announced that in future Victoria, B.C., will be the only Canadian port of call, instead of Victoria and Vancouver as hitherto. If sufficient inducement offers, and time permits, occasional calls may be made at Vancouver.

The International Mercantile Marine Co.'s earnings for December are reported as nearly \$5,000,000, or about \$500,000 more than the best previous estimate. The trend is still upward, and it is expected that later months may exceed the record monthly earnings of \$6,700,000 in 1916.

The France-Canada Steamship Co.'s s.s. Arrino, which left this side recently with cargo for St. Nazaire, France, is reported to have rammed a German submarine while it was engaged in laying mines outside of St. Nazaire harbor. The submarine was disabled in the ramming, and was subsequently destroyed by a French patrol boat.

The Portuguese s.s. Tras Os Montes has been chartered for Canada Steamship Lines' service between New York and Bermuda, and was placed in service on that route toward the end of January. She is the largest vessel ever run on these trips, and has four large observation decks, parlor rooms and all other up to date accommodation. Her dimensions are, length 462 ft., beam 57.6 ft., depth 36 ft.

The yacht Florence, owned by Sir John C. Eaton, Toronto, and latterly operated as a patrol and scout vessel by the Dominion Naval Service Department, is reported sold to the French Trading Co. of Martinique, for commercial purposes. She was built at Elizabeth, N.J., in 1903, and is screw driven by engine of 65 n.h.p. Her dimensions are, length 144 ft., breadth 22.6 ft., depth 9.6 ft.; tonnage, 237 gross, 123 register.

The Hamburg-American Line, which is to a large extent controlled by the German Government, announced, toward the end of December, that it was open to make arrangements for shipping freight from the U. S. to Hamburg, upon the resumption of peace, or such earlier time as

the obstacles to a resumption of traffic may be removed. The announcement is a little previous, as there appears to be no possibility of an immediate peace, and the obstacles to a general resumption of German shipping are still in existence.

The s.s. Thorjerd, which recently left Port Arthur, where she was built, for New York, to take up coasting service, arrived at her destination early in January, in a battered condition, due to heavy storms, after passing from the Gulf of St. Lawrence. She ran out of fuel, and it is stated that on her arrival the pilot house was the only woodwork left in her construction, everything else having been used for fuel. She eventually had to be towed into port.

A number of British and allied steamships, trading across the Atlantic Ocean, are reported to have been sunk or taken to neutral ports as prizes, by a German raider, or raiders, running loose in the Southern Atlantic. Details are naturally lacking, but amongst those mentioned, the most intimately concerned with Canada is the C.P.R. s.s. Mount Temple. She was built at Newcastle upon Tyne, Eng., in 1901, of steel, with twin screws, triple expansion engines, electric light, submarine signalling and wireless telegraph equipments, etc. Her dimensions were, length 485 ft., breadth 59 ft., depth 30.4 ft.; registered tonnage, 8,790.

Regarding the reports about the Cunard Steamship Co.'s possible arrangements for the extension of its services on the Atlantic and Pacific Oceans, the following paragraph is taken from the Canadian Northern Ry. report for the year ended June 30, 1916: An agreement of great importance in the development of the system's freight and passenger traffic was made during the year with the Cunard Steamship Co. Under its terms the Cunard Co. has taken over the Atlantic steamships controlled by the C.N.R. and a close working alliance is in effect between the two companies, the various Canadian services of the Cunard Line and the C.N.R. having become, in effect, a single transportation unit between Europe and Canada. Steamship services on the Pacific Ocean are also in contemplation."

**Port Maitland Harbor.**—The Public Works Department has dredged a channel 328 ft. wide, from deep water in Lake Erie to the entrance between the breakwater piers at Port Maitland, the west edge of the channel being in line with the west breakwater pier. From the inner entrance to the piers, a 300 ft. channel has also been dredged upstream to the car ferry slip, opposite which a turning basin has been dredged 650 ft. wide. From this point the existing channel of Grand River has been deepened and widened, near the east shore, to an average width of 100 ft., for 2,200 ft. All the dredging has been done to a depth of 21 ft. below the datum line, or deeper, the datum line being 571.8 ft. above mean sea level.

**Lake and Rail Rates Cancellation Forbidden.**—The Interstate Commerce Commission has decided at Washington, D.C., that the proposed cancellation of joint rail, lake and rail class and commodity rates from points in the east to points south and west of the Great Lakes, now maintained by various railways, in connection with two steamship lines operating on the lakes, the Cleveland & Buffalo Transit Co. and the Detroit & Cleveland Navigation Co., is not justified.

## Maritime Provinces and Newfoundland.

Pickford & Black, Halifax, N.S., are reported to have chartered the Norwegian s.s. Amanda for service between Halifax and Jamaica.

The harbor of St. John's, Nfld., is again open to navigation, and the lights in St. John's harbor, at Cape St. Francis, Cape Spear, Bay Bulls, Ferryland Head and Fort Amherst, are re-exhibited.

Vessels larger than fishing boats are warned against attempting to enter Little Glace Bay harbor, on the east coast of Cape Breton, N.S., on account of the depth of the channel having been reduced to 5 or 6 ft., owing to ballast having been washed from the piers at the entrance during a recent storm.

The Eastern Steamship Corporation's property has been sold under foreclosure proceedings, for \$3,366,000, the purchaser assuming all liabilities. The properties covered by the transaction include wharves and warehouses at St. John, N.B., and in Maine, Massachusetts and New York, and a number of steamships. An interest in the Boston & Yarmouth Steamship Co., consisting of 6,700 shares, valued at \$335,000, was also included in the sale. A steamship service was operated between St. John and Boston by the steamships Calvin Austin, Governor Cobb, Governor Dingley and North Star.

## Province of Quebec Marine.

The Quebec Board of Trade is conducting a campaign among British shipbuilders, pointing out the advantages as a location for shipbuilding plants.

During 1916, between April 24 and Dec. 15, 3,265,022 tons of cargo passed through the Lachine Canal, against 3,265,294 for the previous year. The canal was open for business 236 days in each year, and the cargo tonnage is practically the same in each case.

The Assistant Deputy Minister of Marine advised the Quebec Board of Trade recently that the North Channel, below Quebec, which had been dredged to a greater depth than 25 ft. at low tide, would not be open for navigation for ocean steamships next season, as there are a great many points sticking up which will have to be cleaned up. An elevator dredge is under construction, and when this is ready for service about the middle of the season, it will be placed at work dredging to a minimum depth of 35 ft. at low tide, which the Department desires to have before opening the channel to navigation.

The Shipmasters' Association, at its annual meeting at Vancouver, B.C., Jan. 5, discussed the question of "double-headed" certificates held by some masters. This has been up for discussion on several occasions, but the association has taken no definite action. The members claim that it is unfair that U. S. shipmasters, in addition to having U. S. papers, can obtain Canadian papers by showing that they have sailed during three years in Canadian waters, while the U. S. authorities do not extend similar privilege to Canadian shipmasters. The discussion was adjourned to a future meeting.

The name of the s.s. Cora, which has been purchased in the U. S., and placed on the Canadian register, has been changed to Thomas B.

## Ontario and the Great Lakes.

The Governor General in Council has approved amended regulations for the ferry across the Niagara River between Fort Erie, Ont., and Buffalo, N.Y.

The Toronto Harbor Commission reported to the city council recently, that up to the end of Nov. 1916, \$1,014,411 had been spent on harbor improvements, \$119,828 being spent in November. The total appropriation to that date was \$2,693,896.

The Collingwood Shipbuilding Co., Ltd., Collingwood, Ont., has the following repair work on hand: s.s. J. A. McKee, side damage; s.s. Alberta, machinery overhauling; s.s. Glen Lyon, bottom damage; s.s. Iroquois, bottom damage; s.s. Imperial, collision damage.

The ferry steamboat Bigelow, operating between Brockville, Ont., and Morris-town, N.Y., crossed the St. Lawrence between these points Jan. 10, the river being free from ice. On Jan. 11 the river was frozen over and pedestrians were able to cross without difficulty.

The Grain Growers' Export Co. failed in its action at Toronto, Jan. 24, against Canada Steamship Lines, Ltd., to recover \$18,376.75 for the destruction of 10,501

bush. of wheat, which was loaded into a vessel which it was alleged was not tight, staunch and strong or fit to carry such cargo.

The U. S. Lake Survey reports the levels of the Great Lakes in feet above mean sea level for December as follows: Superior, 603.16; Michigan and Huron, 580.56; Erie, 571.56; Ontario, 245.37. As compared with the average December levels for the past 10 years, Superior was 0.94 ft. above; Michigan and Huron, 0.55 ft. above; Erie, 0.11 ft. above, and Ontario, 0.02 ft. below.

Canada Steamship Lines, Ltd., has purchased the machinery of the s.s. Fred Pabst from the Reid Wrecking Co., Sarnia. The machinery is to be removed and installed in a new wooden hull which the company will build at its shipyards at Sorel, Que. The vessel was built in 1890, and has dimensions, 287 ft. keel by 42 ft. beam, 2,430 tons gross, 1,929 tons register. She is equipped with triple expansion engines with cylinders 21, 33½ and 57 in. diam. by 42 in. stroke, supplied with steam by 2 Scotch boilers 13 by 10½ ft.

The United States Circuit Court of Appeals on Jan. 2 affirmed the ruling of the lower court which issued an injunction restraining the Great Lakes and St. Law-

## Sault Ste. Marie Canals Traffic.

The following commerce passed through the Sault Ste. Marie Canals during December, 1916.

ARTICLES	CANADIAN CANAL	U. S. CANAL	TOTAL
Copper.....Eastbound.....Short tons	3,882	122,161	126,043
Grain.....Bushels	46,086,508	47,093,808	93,180,316
Building stone.....Short tons			
Flour.....Barrels	3,339,331	6,837,129	10,226,460
Iron ore.....Short tons	11,487,371	51,935,809	63,423,180
Pig iron.....Short tons		35,082	35,082
Lumber.....M. ft. b.m.	13,689	327,663	341,352
Wheat.....Bushels	86,825,438	139,237,877	226,063,315
General merchandise.....Short tons	57,443	281,470	338,913
Passengers.....Number	16,055	12,064	28,119
Coal, hard.....Westbound.....Short tons	87,710	2,122,509	2,210,219
Coal, soft.....Short tons	942,827	12,970,073	13,912,900
Flour.....Barrels	12,960	421	13,381
Grain.....Bushels		9,245	9,245
Manufactured iron.....Short tons	23,071	144,091	167,162
Iron ore.....Short tons	14,448	14,479	28,927
Salt.....Barrels	66,787	663,053	729,840
General merchandise.....Short tons	350,753	959,354	1,310,107
Passengers.....Number	15,560	11,243	26,803
SUMMARY			
Vessel passages.....Number	6,691	18,716	25,407
Registered tonnage.....Net	12,786,256	57,038,207	69,824,463
Freight—Eastbound.....Short tons	15,373,354	58,775,064	74,148,418
—Westbound.....Short tons	1,429,646	16,310,155	17,739,801
Total freight.....Short tons	16,803,000	75,085,219	91,888,219

## COMPARATIVE STATEMENT FOR THE SEASONS 1915 and 1916.

ITEMS	SEASON 1915	SEASON 1916
Vessels: Steamers.....Number	17,999	21,606
Sailing....." "	1,884	2,461
Unregistered....." "	1,650	1,340
Total....." "	21,233	25,407
Lockages.....Number	13,808	16,190
Tonnage: Registered.....Net	56,399,147	69,824,493
Freight.....Short tons	71,290,304	91,888,219
Passengers.....Number	50,336	54,922
Coal: Hard.....Short tons	2,030,730	2,210,219
Soft.....Short tons	11,326,328	13,912,900
Flour.....Barrels	8,436,937	10,239,841
Wheat.....Bushels	255,481,558	226,063,315
Grain.....Short tons	54,786,870	93,189,561
Manufactured and Pig Iron.....Short tons	211,781	202,194
Salt.....Barrels	699,337	729,840
Copper.....Short tons	156,436	126,043
Iron Ore.....Short tons	45,213,604	63,452,107
Lumber.....M. ft. B. M.	456,451	341,352
Building Stone.....Short tons		
General Merchandise.....Short tons	1,595,398	1,649,020

The Canadian canal was opened April 18 and closed Dec. 18, 1916; season 245 days.  
The U.S. canal was opened April 20 and closed Dec. 19, 1916, season 244 days.

rence Transportation Co. from selling of its steamships, claimed by the Scranton Coal Co. as being used by it for coal transportation. The situation is rather an interesting one, as the vessels were sold some time ago, delivery has been made, and one of them, at least, has been sunk by the enemy. When the injunction was granted, the vessels were at Montreal, and had been sold to French parties.

### British Columbia and Pacific Coast.

The Harbor Shipping Co. is reported to have chartered the sealing steamship *Eva Marie* for general freight in the Gulf of Georgia and Puget Sound.

The Governor General in Council has approved the Vancouver Harbor Commission's bylaw 114, providing that the salary of the Superintendent of the Government wharf at Salisbury Drive be \$150 a month, from Dec. 1, 1916.

It is reported that the C.P.R. will withdraw its s.s. *Otter* from the Gulf Islands run, Feb. 1, and that the Dominion Government has been notified that the company will not seek a renewal of the mail contract. It is claimed that the service is not remunerative.

The ferry boat *Langley Fort* has discontinued calling at *Langley* on its way to *New Westminster*, owing to the dredging required to be done there. It is stated that much of the traffic which usually went by the ferry is now being taken by the Canadian Northern Ry.

The Dominion Government wharf at Vancouver was opened for business, Jan. 1. The main structure has been finished for some time, but the buildings and railway tracks were only completed during December. The approximate cost of the wharf and buildings is \$2,500,000.

The Alaska Steamship Co.'s s.s. *Stanley Dollar*, which ran aground at *Galiano Island*, near *Helen Point*, Jan. 12, was released by the C.P.R. steam tug *Nitinat* on the following day. The *Stanley Dollar* was bought recently by the Alaska Steamship Co. from the *Robert Dollar Steamship Co.*

The Grand Trunk Pacific Coast Steamship Co.'s s.s. *Prince Rupert* was dry docked at *Esquimalt* during January for some bottom repairs, after touching ground when on the northern route some months ago. Machinery repairs were also undertaken, and she was generally overhauled and painted.

The Imperial Oil Co.'s s.s. *Imperoyal* was docked at *North Vancouver* during January for general overhaul and repairs. She was, until recently in service on the Great Lakes, and some time ago went to Mexico, passed through the Panama Canal, ran down the coast to Peru and later went to *Prince Rupert*.

The Ship *Esquimalt Co., Ltd.*, has been incorporated under the British Columbia Companies Act, with \$200,000 capital, and office at Vancouver, to enter into an agreement with *Cameron-Genoa Shipbuilders, Ltd.*, for the construction by the latter, and purchase by the former, of the schooner *Esquimalt*, now on the stocks at *Victoria*, and to carry on a general trading and commission business.

It was expected in Vancouver that the Dominion Government would, during January, award contracts in British Columbia for the construction of two wooden vessels with auxiliary motive power, similar in type to those now under construction in the Province for the Canada West Navigation Co., of which some details have

already been published. It is intended that these vessels will be used on a route between the Canadian coasts on the Pacific and Atlantic Oceans, via the Panama Canal.

### Marine Engineers Wage Scale on Great Lakes.

The National Association of Marine Engineers of Canada has issued a card to steamship owners giving the following minimum wage scale and classifications for steamships operating on the Great Lakes District, which was adopted by the Association's Great Lakes Executive Committee at the annual meeting in Toronto, on Janu. 4, representing *Port Arthur*, *Sault Ste. Marie*, *Collingwood*, *Owen Sound*, *Midland*, *Toronto* and *Kingston* councils, and approved by the National Executive Committee. The contents are as follows:

"This card to be effective during the season of 1917, or until revised or amended by the Lake Executive Committee. This classification and schedule does not apply to certain ferry steamers, where special arrangements may be necessary, or to superintending engineers. All reference to tonnage to be construed as gross tons. In reference to employment, transportation, board, etc., 1916 conditions to prevail.

#### Passenger Steamers.

Class 1. All passenger steamers of 3,500 tons or over: chief engineer, \$1,800 per season; second engineer, \$125 a month.

Class 2. All passenger steamers of 1,250 tons and under 3,500 tons: chief engineer, \$1,600 per season; second engineer, \$110 a month.

Class 3. All lake passenger steamers under 1,250 tons and all passenger steamers confined to river, service requiring second class engineer: chief engineer, \$1,400 per season; second engineer, \$90 a month.

Class 4. All passenger steamers from 45 n.h.p. to 25 n.h.p.; chief engineer, \$120 a month; second engineer, \$80 a month.

Class 5. All passenger steamers under 25 n.h.p.; chief engineer, \$100 a month.

#### Freight Steamers.

Class 1. All freight steamers, 6,000 tons and over: chief engineer, \$1,800 per season; second engineer, \$125 a month.

Class 2. All freight steamers of 3,000 tons and under 6,000 tons: chief engineer, \$1,600 per season; second engineer, \$110 a month.

Class 3. All water bottom freight steamers under 3,000 tons, requiring second class engineer: chief engineer, \$1,400 per season; second engineer, \$100 a month.

Class 4. All freight steamers not included in classes 1, 2 and 3, and requiring second class engineers: chief engineer, \$135 a month; second engineer, \$90 a month.

Class 5. All freight steamers, 250 tons and over, and requiring third class engineers: chief engineer, \$110 a month; second engineer, \$90 a month.

#### Tug Steamers.

Class 1. All tug steamers requiring second class engineers: chief engineer \$135 a month; second engineer, \$100 a month.

Class 2. All tug steamers from 75 n.h.p. to 30 n.h.p.: chief engineer, \$125 a month; second engineer, \$95 a month.

Class 3. All tug steamers under 30 n.h.p., requiring licensed engineers: chief engineer, \$110 a month; second engineer, \$85 a month.

### Shallow Draught Vessel Building in British Columbia.

It was announced in our last issue that *Yarrows Ltd.*, *Victoria, B.C.*, had received an order for a stern wheel, shallow draught steamboat, similar to one supplied by them recently for Indian waters. This type of vessel is in great demand for operation in countries where there are shallow rivers and swampy regions where it is difficult to navigate.

The hull is of light weight steel, with steel main deck and holds for cargo. The upper deck, which is of wood, is for the cabins and passenger accommodation, with dining room and other conveniences, and above this is a galvanized roofing to protect the cabins, etc. The aim is to have strength combined with lightness, so as to obtain the least possible draught when afloat. The hull is strengthened by 6 king posts of H section steel, 3 on each side of the vessel, braced together with diagonal trussing of 3 in. double angle steel bars, also a longitudinal bulkhead in the centre of the vessel, running from forward to aft, with deck stringers under the main deck. There are 8 transverse bulkheads, making the hull into water tight compartments, so that in the event of one compartment being punctured, the remaining ones will keep the vessel afloat. The vessel draws 18 ins., and when loaded with 100 tons, approximately 36 ins. In building the vessel, the system adopted is that the plates, angles, machinery, etc., are made of such weight as may conveniently be handled and packed in cases or crates, so that the different parts may be transported easily to places difficult of access, and assembled where required, each piece being marked to its place. The rivetting is all done cold.

The *Esquimalt Graving Dock Committee*, an organization, with *J. W. Phillips* as Secretary, formed to promote the establishment of a dry dock at *Esquimalt*, is petitioning the Dominion Government and urging that the proposed dock be commenced and completed with all possible speed. It is pointed out that when *British Columbia* entered the Dominion, the latter government undertook to use its influence to secure the continued maintenance of a naval station at *Esquimalt*, and it was also provided that the Dominion Government guarantee interest for 10 years from the completion of certain works, at the rate of 5% per annum, on an amount not exceeding £100,000, as might be required for the construction of a first class dock. The present dry dock, which was completed about 1881, is no longer capable of handling the modern steamships, and the vessels which would otherwise have been repaired at *Esquimalt*, have had to go to the U. S. The Dominion Government, in 1914, selected *Lang's Cove* as the site for an up to date dry dock, and considerable adjacent property was purchased for erecting workshops, but since then, nothing has been done in the matter.

*Port Arthur Shipbuilding Co., Ltd.*, has been incorporated under the Ontario Companies Act, with \$2,500,000 capital and head office at *Port Arthur*, to carry out an agreement with the *Western Dry Dock and Shipbuilding Co., Ltd.*, whereby the latter agrees to sell to the former, its undertaking, plant, etc. The company is empowered to carry on a general shipbuilding business, and to own and operate steam and other vessels, and to own shares in any other business similar to its own.

### Mainly About Marine People.

**D. J. McKinnon**, Sydney, N.S., has been appointed harbor master of the port, vice A. McQuarrie, resigned.

**W. G. Ross**, Chairman, Montreal Harbor Commissioners, has been appointed Director of Naval Recruiting for Quebec Province.

**Sir Montagu Allan**, formerly of the Allan Line Steamship Co., Montreal, has taken a house in Park Lane, London, Eng., for the winter.

**Capt. E. Kinney** has resigned as master of the Boston and Yarmouth Steamship Co.'s s.s. Prince George, on receiving an appointment under the Dominion Government on the Pacific Coast.

**Capt. A. Simms**, heretofore master of the Eastern Steamship Corporation's s.s. Boston, has been appointed master of the Boston and Yarmouth Steamship Co.'s s.s. Prince George, vice Capt. E. Kinney resigned.

**Alexander Cox**, master of the Canadian Northern Ry. barge no. 1, operating between Port Mann and Vancouver Island, was drowned at Port Mann, Jan. 1. It is supposed that he missed his footing when returning to his vessel in the dark.

**H. W. Richardson**, who has been appointed to the Senate, is head of the firm of James Richardson & Sons, grain dealers, Kingston, and is Vice President, Great Lakes Transportation Co., Midland, Ont., and one of the Dominion Government directors of the Canadian Northern Ry.

**Capt. J. E. McDonald**, formerly in the Dominion Government service as mate of the s.s. Quadra, and **Capt. Dickson**, master of the Union Steamship Co.'s s.s. Camosun, have joined an inland water transport unit, recruited in British Columbia, and were expected to leave Canada during January, for Mesopotamia.

**Capt. William Babb**, who died at Goderich, Ont., aged 77, commenced his seafaring career as a midshipman in the Royal Navy, and after obtaining his papers as a first class gunner, put in several years in service round the British coast and in the Mediterranean Sea, on H.M.S. Marlborough, under Lieut. Fisher, now Rear Admiral Fisher, R.N. He came to Canada in 1860 on the H.M.S. Cherub and was engaged in patrolling the Detroit River guarding against Fenian raiders, and went with that vessel on patrolling service in the West Indies, and transferred to the H.M.S. Revenge in 1870. He settled in Goderich in 1870, and served on the s.s. Prince Albert during the Fenian raid of that year as gun instructor.

**Herbert Newbold McMaster**, who has been appointed Marine Superintendent, Montreal Transportation Co., Kingston, Ont., was born at Deseronto, Ont., Aug. 6, 1876, and commenced his navigation career in the spring of 1890, since when he served in various capacities, to the autumn of 1897, on Frank McMaster's fore and aft schooners, Picton, and Anandale, and on the Standard Oil Co.'s s.s. Vanallen; 1898, mate, s.s. Resolute, Deseronto Navigation Co.; 1900 and 1901, mate, s.s. Advance, Mathews Steamship Co.; 1902 and 1903, mate, Frank McMaster's schooner, Emerald; 1903, mate, s.s. Fairmount, Montreal Transportation Co.; 1904, mate, s.s. Iroquois, St. Lawrence and Chicago Steam Navigation Co.; 1905 and 1906, master, s.s. Golspie, R. O. & A. B. Mackay; 1906, master, s.s. Edmonston, Mathews Steamship Co.; 1907 to 1912, master, various steamships, Mont-

real Transportation Co.; Jan. 1, 1913 to Dec. 31, 1916, Assistant Marine Superintendent, Montreal Transportation Co., Kingston, Ont., and for the last two years at New York, superintending the movement and repair of the company's vessels engaged in Atlantic service, calling at ports between Halifax, Newport News and the West Indies. In the early stage of his career he was a ship's carpenter, and during the winter was engaged at the Deseronto shipyards.

**J. C. Gore**, Superintendent, British Columbia Lake & River Service, C.P.R., died suddenly at Nelson, Jan. 18. He had been laid up for a few days with grippe, but had been at his office on the day of his death. He was seized with an attack of coughing, and died from heart failure. He went to British Columbia from the Willamette River in 1891, and was appointed captain for the Columbia & Kootenay Steam Navigation Co., then operating steamboats on the Okanagan, Arrow, Kootenay and Slocan Lakes, and was master of the steamboat Nakusp. When the C.P.R. acquired that company in 1896 he entered C.P.R. service, and in 1901, when the C.P.R. acquired the Canadian Pacific Navigation Co., he was appointed as Superintendent of the Lake and River Service.

**The Outlook for Lake Shipping.**—The Canadian Bank of Commerce monthly commercial letter for January says: "There is little doubt that there will be for some years to come abundant employment for a larger tonnage on the Great Lakes than is at present in service. British registered steel tonnage on the lakes is now 218,019 tons, compared with 286,121 tons at the close of the 1915 season. The tonnage of new vessels added to the lake service during 1916 was 12,218 tons, and that of vessels purchased from the U.S. and added to British registry was 15,349 tons. The decline is due to the transfer to ocean service of 50 vessels, aggregating 95,669 tons. This decline in tonnage is serious in view of the expanding volume of lake traffic, and under the circumstances it is reasonable to assume that Canadian shipbuilders have before them a period of unusual activity. A large proportion of the total lake freight traffic consists of iron ore and the carriage charges per ton at present are \$1.25 compared with the normal rate of 50c, a marked indication of the general increase in the cost of transportation."

**Vessels Turning in the River at Fort William.**—About the middle of 1916 an order in council was passed requiring all vessels desiring to turn when in the river

at Fort William, to go into one of the turning basins for the purpose. The Dominion Marine Association, at the time, protested against the order, on the ground that it would work unnecessary hardship on canal sized vessels, without corresponding advantage. The Marine Department took the matter under consideration, but decided that for the time being, the regulation would have to stand. The association has further considered the matter, and it has been decided to ask for the exemption of canal size vessels, in two sections of the Kaministikwia River, subject to such proper supervision as the department may require. It was also decided to point out that turning basins should be above, rather than below bridges, where possible, particularly where a long stretch of frequented water is below the bridge, and vessels are required to pass the bridge to make a turn. The practice of mooring or laying up vessels along the shores of the turning basins is also being protested against.

**Chicago Drainage Canal and Great Lakes Levels.**—The Dominion Marine Association has again had under consideration the withdrawal of water from the Great Lakes, for use through the Chicago Drainage Canal, and has decided to bring the matter before the Shipping Federation of Canada and the Lake Carriers' Association, with a view to joint action, either by way of appeal to the respective governments or by joint application to the International Joint Waterways Commission.

**Grain Shortages and Overages in Cargoes.**—The Dominion Marine Association had under discussion recently the regulations regarding the outruns of grain cargoes and the adjustment or shortages and averages, and an interim report on the subject by a special committee appointed by the Grain Commission to consider a scheme for adjustment which would be satisfactory to all parties.

**Load Line Restrictions on Vessels to Australia.**—The Dominion Government is negotiating with the Australian Government for a modification of the load line restrictions imposed on Canadian vessels trading with Australia. The matter is being handled by the Marine Department, and it is expected that the discrimination which exists under the present regulations will be done away with.

**British Shipbuilding.**—It is announced from London, Eng., that the Government has issued instructions to several shipyards where high class passenger vessels are under construction, that such work must cease and the labor be diverted to the construction of plain cargo vessels.

### Shipments of Grain from Fort William and Port Arthur.

Following are comparative statistics, supplied by the Board of Grain Commissioners, showing the total bushels of each kind of grain shipped from Fort William and Port Arthur in Canadian and United States vessels during 1913, 1914, 1915 and 1916:

	Wheat.	Oats.	Barley.	Flax.	Totals.
1916—					
895 Canadian vessels . . . . .	97,288,766	44,015,292	6,235,464	1,715,590	149,255,112
565 United States vessels . . . . .	84,397,225	13,805,947	2,651,818	3,859,396	104,714,386
1,460 cargoes . . . . .	181,685,991	57,821,239	8,887,283	5,574,987	253,969,498
1915—					
687 Canadian vessels . . . . .	68,537,524	23,057,013	2,718,499	967,830	95,280,866
452 United States vessels . . . . .	98,827,699	4,174,796	2,074,004	1,436,547	106,513,046
1,139 cargoes . . . . .	167,365,223	27,231,810	4,792,504	2,404,378	201,792,912
1914—					
751 Canadian vessels . . . . .	64,881,194	22,473,825	4,026,586	1,793,747	93,175,352
138 United States vessels . . . . .	22,886,876	3,490,095	1,069,595	5,777,907	33,224,473
889 cargoes . . . . .	87,768,070	25,963,920	5,096,182	7,571,655	126,399,825
1913—					
Canadian vessels . . . . .	63,556,912	26,936,057	6,755,942	9,385,685	106,634,596
United States vessels . . . . .	68,241,075	13,844,653	4,840,076	9,680,376	96,606,180
Totals . . . . .	131,797,987	40,780,711	11,596,019	19,066,061	203,240,776



### Regulations Respecting to Order Bills of Lading.

The British Colonial Secretary has called attention to the regulations respecting the use of manifests and bills of lading made out to order during the war and has requested that a notice similar to that issued in Great Britain may be issued in Canada. The notice mentioned calls the attention of shippers, shipowners and the trading community generally to the fact that in time of war the practice of shipping goods with bills of lading made out to order, which was made illegal by sec. 4 of the Customs War Power Act, 1915, in the case of goods shipped from the United Kingdom under license, is very undesirable in respect of any goods, exported from any part of the British Empire. Shippers not requiring licenses are therefore advised not to make out bills of lading to order, but only to a named consignee or to a bank or financial house of high standing, with the remark in the margin, "Notify John Smith," or the name of the person or firm for whom the goods are ultimately designed. Goods shipped to Holland should be consigned to the Netherlands Overseas Trust. It is essential during the war that, in the case of all goods shipped, whether by license or not, British ships should have on board throughout the voyage a full manifest of cargo and all bills of lading, or certified copies. Unless these requirements are complied with, there will be a risk that the ships will be stopped and diverted by His Majesty's ships or war vessels of the allied nations, in order to permit of full examination of the cargo, and the ascertainment of its destination. In the case of British ships that will touch at ports in countries contiguous to enemy territory, compliance with these requirements is of special importance and serious delay may result to ship and cargo in such cases if all ship's papers are not on board and in order.

### Stranding of the s.s. Iroquois.

The Dominion Wreck Commissioner, Capt. L. A. Demers, assisted by Capts. J.

B. Foote and Jas. McMaugh, held an enquiry at Toronto, Jan. 12, into the causes of the stranding of Canada Steamship Lines' s.s. Iroquois at Hare Island shoal, St. Lawrence River, Nov. 27. The Canadian Lake Protective Association was represented by Francis King, M.A., Counsel, Dominion Marine Association. The court found that the evidence of the master, Capt. Hudson, was straightforward, but indicated a lack of ambition to acquire further knowledge of the work he was likely to be called on to perform, which is surprising in a young member of the profession, and borders on indifference. The court expressed the opinion that when a sailing master is engaged, the master should be instructed to the effect that he, the master, is still the responsible officer. In other cases, the court had urged that masters should show more loyalty to their owners by acquiring all the knowledge possible of conditions existing in the waters strange to them. The court characterized the evidence of T. R. Desjardins, the sailing master, as a tissue of contradictory statements, and doubted whether he clearly understood the import of questions addressed to him. In leaving the navigation of the vessel, without being relieved by a competent officer, he showed lack of a proper sense of responsibility. His navigation was indifferently done, and, as he considered himself legally the master of the vessel, his conduct cannot be condoned, and there is no justification for his carelessness. The court therefore suspended his certificate 6049 for nine months, from Jan. 20 to Oct. 20.

### Great Britain and Shipbuilding in Canada.

Reports from New York state that in connection with the shortage of tonnage and the lack of activity in merchant shipbuilding in the United Kingdom, negotiations are in progress between the British and Canadian Governments, whereby it is hoped to draw upon Canadian shipyards to assist in the rehabilitation of the British mercantile marine. It is also stated that British shipowners under present conditions cannot afford to pay the high

prices asked for new foreign built tonnage, and have urged some arrangement with the colonies and dominions which would make possible the acquisition of ships at lower prices than those generally quoted, and that the action of Canadian shipbuilders in accepting contracts from Norwegians and others has aroused considerable adverse criticism.

Canadian Railway and Marine World for January contained some remarks on this matter, and commented on the fact that some of the Norwegian contracts were being hawked about England, at prices ranging from \$135 to \$145 a ton, which is, undoubtedly, somewhat higher than is asked by shipbuilders in Canada. There are numerous yards in the Dominion quite capable of turning out vessels entirely suitable for ocean freight service, in fact several vessels now engaged in ocean service were built in Canadian yards, and it remains for the purchaser in Great Britain to make greater use of the facilities offered on this side, now that British yards are so fully occupied with other matters of a more important nature.

### Wooden Shipbuilding in British Columbia.

Canadian Railway and Marine World has already published considerable information regarding the type of vessel now under construction in British Columbia shipyards for the Canada West Coast Navigation Co. These vessels, six of which are being built by Wallace Shipyards, Ltd., North Vancouver, and three by Cameron-Genoa Mills Shipbuilders Ltd., Victoria, will be of the following dimensions: Length over all, 260 ft.; length of keels, 225 ft.; beam, 44 ft.; depth of hold, 20 ft. The carrying capacity of each vessel will be from 1,500,000 to 1,750,000 ft. of lumber. In order to handle the greater lengths of stock timber, bow and stern ports are provided, and the cargo will be shipped and discharged by 4 regulation winches supplied with steam by a 6 x 11 ft. Scotch boiler at 130 lbs.

Each vessel will be equipped with two 2-cylinder Bolinder semi-Diesel engines of 160 h.p., working at 225 r.p.m. and turning a 3-bladed propeller. If operated

List of Steam Vessels Registered in and During October and November, 1916.

No.	Name	Port of Registry	Where and When Built	Length	Breadth	Depth	Gross Tons	Reg. Tons	Engines, Etc.	Owner or Managing Owner	
133220	Cadillac	Montreal	South Chicago, Ill.	1892	235 1	36 8	15 4	1297	732	254 sc.	Canada Steamship Lines, Ltd., Montreal
134469	Clincher	Halifax, N.S.	Camden, N.J.	1892	132 6	25 4	16 0	368	66	81 sc.	Canadian Salvage Association Ltd., Montreal
111065	Dan. M. Munro	Windsor, N.S.	Dumbarton, Scotland	1892	220 7	35 0	21 0	1216	888	18 sc.	Newport Plaster, Min'g & Mfg. Co. Windsor, N.S.
134591	Elsie McDonald	Paspebiac, N.B.	Cross Point, Que.	1915	56 4	22 1	4 0	54	33	5 pd.	J. L. McDonald, Campbellton, N.B.
133341	Eug. F. Moran	Halifax, N.S.	Philadelphia, Pa.	1902	96 0	22 1	10 9	192	49	43 sc.	Capt. W. H. Owen, R.E., rep. His Majesty's Sec. of
134605	Fort McMurray	Winnipeg	McMurray, Alta.	1915	151 0	28 3	4 5	661	397	80 sc.	Hudsons Bay Co., London, Eng. [State for War.
134417	F. B. Stevens	Sarnia, Ont.	Buffalo, N.Y.	1867	146 0	29 3	11 0	516	269	47 sc.	American Transit Co., Sarnia, Ont. [State for War.
133342	Julia C. Moran	Halifax, N.S.	Philadelphia, Pa.	1902	96 0	22 1	10 9	192	49	43 sc.	Capt. W. H. Owen, R.E., rep. His Majesty's Sec. of
134470	M. Moran	"	Camden, N.J.	1912	109 0	24 7	14 5	315	111	54 sc.	Canadian Salvage Association Ltd., Montreal
134468	Petrel	"	Port Richmond, N.Y.	1915	123 7	26 3	15 3	540	367	65 sc.	Imperial Oil Co., Sarnia, Ont.
134518	Royalite	Sarnia, Ont.	Collingwood, Ont.	1916	250 0	43 2	16 7	2052	1542	95½ sc.	Manley Chew, Midland, Ont.
134270	Schoolcraft	Midland, Ont.	Trenton, Mich.	1884	185 0	34 0	14 2	972	690	80 sc.	William Edwards Steamship Co., Sydney, N.S.
134528	Wm. Edwards	Sydney, N.S.	Abbott's Bridge, O.	1879	226 0	35 8	18 2	1336	831	107 sc.	

List of Sailing Vessels and Barges Registered in and During October and November, 1916.

No.	Name	Port of Registry	Rig	Where and When Built	Length	Breadth	Depth	Reg. Tons	Owner or Managing Owner	
133895	Ada Tower	Parrsboro, N.S.	Schr.	Port Grenville, N.S.	1916	175 5	36 4	12 9	528	G. M. Cochrane, M.O., Fox River, N.S.
133829	Agnes Wilson	Montreal	Barge	Charlamanque, Que.	1916	126 0	27 3	7 8	225	St. Maurice Paper Co., Montreal
133896	Cumberland County	Parrboro, N.S.	Schr.	Advocate Harb., N.S.	1916	162 2	35 9	12 4	419	J. N. Pugsley, Parrsboro, N.S.
133256	Glaquier	Lunenburg, N.S.	"	Lunenburg, N.S.	1916	112 0	26 2	10 4	99	L. Knock, Rose Bay, N.S.
133191	James Slater	Liverpool, N.S.	"	Port Jefferson, N.Y.	1916	114 9	28 9	9 9	282	Publicover Shipping Co., Dublin Shore, N.S.
133255	Marian J. Smith	Lunenburg, N.S.	"	Liverpool, N.S.	1874	128 2	33 8	11 4	332	W. C. Smith, M.O., Lunenburg, N.S.
133256	Norma L. Conrad	"	"	Mahone Bay, N.S.	1916	102 6	26 2	10 5	99	J. E. Backman, La Have, N.S.
133066	P.W. D. No. 112	Ottawa	Dredge	Sturgeon Falls, Ont.	1905	66 6	24 9	7 2	161	Department of Public Works, Ottawa, Ont.
133067	P.W. D. No. 118	"	"	Mattawa, Ont.	1902	60 0	25 6	5 6	138	
134618	Shipman No. 4	Sault Ste. Marie, Ont.	Scow	Warton, Ont.	1911	110 0	24 4	7 0	164	S. Shipman, Sault Ste. Marie, Ont.

continuously and under full load without canvas, 12 barrels of oil would be consumed in 24 hours, maintaining a speed of 7 knots an hour. Greater speed can of course be made with a spread of canvas in addition. Storage will be provided for 8,000 barrels of oil, and for 5,000 gallons of fresh water. The advantages of auxiliary power in lumber schooners are many, and it is claimed, justify the cost of installation. The saving in towage, and of time in the calm areas, and the greater speed obtainable, are factors in increasing the vessel's earning power and general utility. The speed obtained will compare favorably with many steamships used for coasting purposes, and the advantages to be considered, include saving of space, fuel economy and reduction of engine room labor. The engines of this type require about half the space taken by engines and boilers of similar power, and also weigh about half. The fuel cost will average about 25c an hour, and three men will be employed in the engine room. It is claimed that vessels of this type will pay for themselves in half the time in which a steel vessel will take to work out her cost. They will follow the latest and best practice of the builders of United States schooners designed primarily for the lumber trade, and will be of very heavy construction, the plans have been approved by Lloyd's Register of Shipping and they are to be given the highest rating, A.1 for 13 years. This, we are advised, is the first time that Lloyd's have classed any vessel of this type on the Pacific coast. The vessels will be provided with two large hatches and four cargo winches of the latest type designed for rapid handling of cargo. Vessels of this type carry approximately 50% of their cargo on deck, and they are designed chiefly for the off shore lumber trade. The cost of these vessels complete will be about \$175,000. They were designed by J. H. Price, who designed and built the vessel City of Portland, a large auxiliary motor ship, at St. Helens, Ore., which attracted a great deal of attention in marine circles.

The Mabel Brown and Geraldine Wolvin are the two first vessels to be launched, and they have been chartered to the Canadian Trading Co., for loading lumber in March or April, at Vancouver, for Sydney, Australia, at 120 shillings, and for Melbourne, Australia, at 130 shillings.

### Among the Express Companies.

C. N. Spooner, heretofore route agent, Dominion Ex. Co., Moose Jaw, Sask., has been appointed route agent at Winnipeg.

The Canadian Ex. Co. has opened offices at Kent Jct. and Lac Baker, N.B.; Murray Bay, Que., and Canfield Jct., Ont.

E. F. McDonald has been appointed agent, Canadian Northern Ex. Co., Trenton, Ont., vice E. B. Connelly, enlisted for overseas service.

Wm. Cunningham Scott, who died recently, was the Canadian Express Co.'s agent at the city of Quebec for many years. He started work with the old British & Canadian Express Co., at Quebec, in 1853. Up to that time the express business had been carried by stage coach, and as Quebec City was then without rail facilities his first duties were to attend to shipments sent out by stage. During the succeeding years, the G.T.R. built into Point Levis, opposite Quebec. He had many reminiscences of the difficulties encountered in ferrying produce across the St. Lawrence River, in scows, for transshipment by rail. The British & Cana-

dian Express Co. eventually became part of the Canadian Express Co.'s system and he continued as agent at Quebec. Six years ago, after nearly half a century of service, he retired from active work.

### Telegraph, Telephone and Cable Matters.

Chas. Cassils, Montreal, has been elected Vice President, Bell Telephone Co. of Canada, succeeding Hon. Robert Mackay, deceased.

W. J. Kane, heretofore Inspector of Telegraphs, C.P.R., Brandon, Man., has been appointed Night Chief Operator, C.P.R. Telegraphs, Winnipeg.

The Dominion Public Works Department has had set apart, for a telegraph site, about an acre of Dominion lands, in the n.e. ¼ of sec. 30, Tp. 70, R. 19, w. 4 m.

William Cross, who died at Caledonia Springs, Ont., recently, was engaged in the construction of the first telegraph line to be erected between Ottawa and Montreal.

M. J. Bayley, assistant chief operator, C.P.R. Telegraphs, Toronto, died there, Jan. 7, from pneumonia, after a short illness, aged 45. He had been in C.P.R. service for about 25 years.

A. E. Holmes, heretofore chief operator, Great North Western Telegraph Co., Saskatoon, Sask., has been appointed assistant chief operator at Winnipeg, vice A. D. Campbell, promoted.

A. D. Campbell, heretofore assistant chief operator, has been appointed chief operator, Great North Western Telegraph Co., Winnipeg, vice B. S. Round, who has left the company's service.

W. Rutherford, heretofore Traffic Chief, C.P.R. Telegraphs, Winnipeg, has been appointed Inspector of Telegraphs, C.P.R., Brandon, Man., vice W. J. Kane, who was appointed to that position during last summer on the enlistment of F. E. Camp for active service.

Hon. F. Nicholls, President, Canadian General Electric Co., and Canadian Allis Chalmers Co., and a director, Canadian Northern Ry., and Toronto Ry., has been elected a director of the Great North Western Telegraph Co., in place of the late Hon. J. K. Kerr.

The Great North Western Telegraph Co.'s office fixtures, switchboards, instruments, etc., at St. Catharines, Beamsville, Jordan, Merritton and Niagara Falls, Ont., were destroyed by fire Jan. 12, owing to a high tension wire falling across the telegraph line near Grimsby.

Application is being made to the Dominion Parliament for the incorporation of the British American Telephone & Telegraph Co., to erect and operate telephone and telegraph lines, wireless telegraph stations, etc., in Canada and elsewhere. Pringle & Guthrie, Ottawa, are solicitors for applicants.

A. A. Rogers, heretofore night chief operator, has been appointed chief operator, Great North Western Telegraph Co., Saskatoon, Sask., vice A. E. Holmes, transferred; F. F. Yerex, heretofore all night chief operator, has been appointed night chief operator, vice A. A. Rogers; and R. W. Pearsall has been appointed

The Board of Railway Commissioners has issued order 25754, Dec. 27, 1916, respecting the Great North Western Telegraph Co.'s tariff C.R.C. 47, increasing the rate on words in excess of 10 words in messages between the company's offices in Ontario, Quebec and New Brunswick.

The question having arisen as to the company's power to increase rates in view of the limitation imposed by the act consolidating and amending the acts relating to the Montreal Telegraph Co., and the Board having at the company's request submitted the question for the opinion of the Supreme Court of Canada, it is ordered that pending the Supreme Court's decision, and until further order, the effective date of the proposed tariff is postponed. This application was specially brought to the Board's attention by the Great North Western Telegraph Co., for a settlement of the question as to whether the present rate of 25c for 10 words and 1c for each additional word, in the provinces named, is permanently fixed by statute, or not. The question came up when the Board recently made a general enquiry into telegraph rates, and the company claims that a certain act fixing these rates never came into force and effect.

### 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.

The Coleman Fare Box Co., Ltd., is removing its plant from Tottenham, Ont., where the business was founded, to Toronto, where it has leased premises at 1191 Bathurst St. The head office will remain at 70 Bond St., Toronto.

Wall Calendars for 1917 have been received from J. Bertram & Sons Co., Ltd, machine tools, Dundas, Ont.; W. W. Butler Co., Ltd., railway, marine and mining supplies, Montreal; Pratt & Whitney Co. of Canada, Ltd., small tools, Dundas, Ont.; Taylor & Arnold, Ltd., railway and contractors' supplies, Montreal.

Electric Service Supplies Co., Philadelphia, Pa., which is represented in Canada by Lyman Tube & Supply Co., Ltd., has issued a catalogue of golden glow headlights, searchlights and projectors, 52 pgs., containing illustrated descriptions of these articles and particularly dealing with marine searchlights for vessels and harbor service.

Lyman Tube & Supply Co. Ltd., to supplement its service from its Montreal and Toronto stocks of steam and electric railway supplies, tubing, metals and mechanical equipment, has established a purchasing office at 2606 Equitable Building, New York, N.Y., under K. E. Gury's management, to locate and secure promptly from existing, but closely held, stocks, materials and equipment on which manufacturers will not promise early delivery.

Canadian Westinghouse Co., Ltd., has been authorized to increase its capital stock from \$5,000,000 to \$10,000,000, in 50,000 shares of \$100 each. The company will issue \$1,250,000 of new stock at par to shareholders of record Feb. 1 in the proportion of one share for every four shares held on that date. The directors, out of the profits accumulated since the company's inception 12 years ago, have declared a dividend of 25%, payable Mar. 1, to shareholders of record Feb. 1. This dividend will be used in payment of stock subscriptions. In effect the company's cash dividend is thus a stock dividend, since the cash bonus will pay for the new stock.