

# Canadian Railway and Marine World

September, 1920

## Snow Fighting Equipment.

By W. H. Winterrowd, Chief Mechanical Engineer, Canadian Pacific Railway.

In certain portions of Canada and the United States the successful and regular movement of trains during the winter often depends upon the use of special equipment, the purpose of which is to remove snow and ice from the tracks and from the direct right of way. The object of this paper is to describe briefly the various types of such equipment. In a study of snow fighting equipment, it is interesting to note that its development is very largely due to Canadians and to Canadian railways, although snow conditions in Canada are no more severe than those met with on roads passing over the Rocky or Cascade Mountains in the United States.

The Russell design of snow plough was first put in service in 1885 on the Intercolonial Ry., now a part of the Canadian National Rys. The present rotary snow plough is a development of the invention of a compound revolving snow shovel, patented in 1869 by J. W. Elliott, a Toronto, Ont., dentist. This elementary device was modified by Mr. Orange Jull of Orangeville, Ont. The Jull rotary was taken up by the Leslie Bros., also of Orangeville, who built a full size model which was tried in the C.P.R. yards at Parkdale, Toronto, in 1884. The success of this trial led the Leslie Bros. to have made for them a complete plough which

was tried by the Union Pacific Rd. during the winter of 1886-87. This plough was the forerunner of the modern rotary. Orange Jull also invented, in 1889, the Jull centrifugal excavator. This type was not a success. Only one or two were built. The principal types of snow fighting equipment may be generally classified as follows: Locomotive and pilot ploughs, push ploughs, wing ploughs, spreader ploughs, machine ploughs, flangers, ice cutters and snow sweepers.

**Locomotive and Pilot Ploughs.**—As far as the writer can ascertain, the first snow plough ever built was of the push plough type. This was a wedge shaped wooden plough mounted on trucks and pushed in front of a locomotive. As this plough derailed frequently, an endeavor was made to take advantage of the weight of the locomotive. A plough was constructed utilizing the front end of the locomotive as a support. This was called a locomotive plough and fig. 1 shows an application made in 1880. This plough was made of steel. Locomotive ploughs are still in use today and their general arrangement has not been changed, except to adapt them to larger locomotives. The mold plates are generally built on a strong frame, which is bolted to the

front bumper in place of the pilot. On some of the original locomotive ploughs a framework fastened to the front of the pilot supported the nose of the mold plates. With the construction shown in the illustration it is usual to apply cast iron wearing shoes, which rest on and slide along the top of the rail if the weight and force of the snow cause a depression of the nose of the plough. Several railways have advised that occasionally locomotive ploughs are permanently secured to the front of a locomotive assigned only to plough service, thus making a complete unit available at any time. For severe work this locomotive may be assisted by others.

The pilot plough was developed for use in light snow. One form of pilot plough is made by either boarding over

sisting of a substantially built car, with a wedge shaped plough attached to its front end. This plough is generally pushed by one or more locomotives. The car may be fitted with flangers for cleaning the space between the rails. When the car is equipped with wings for widening the cut it is called a wing plough. Many railways use, for snow of moderate depth, a plough secured to the front end of a flat or ballast car, as shown in fig. 4, the car being loaded down with scrap iron or other heavy material. A more permanent construction is shown in fig. 6, where the mold plates are attached to the front end of a specially constructed car. This figure shows a plain, square nosed, single track plough without wings or flangers. The side walls are carried down over the trucks to prevent snow from working into them.

Push ploughs were frequently built V-shaped, simply throwing the snow to each side, without lifting it appreciably. These ploughs did not always prove satisfactory, as the snow was crowded aside, and if drifts were deep or in cuts it fell back on the track after the plough had passed. In hard drifts this plough packed the snow. In heavy side drifts, the form of the plough tended to derailment. Also, when backing, unless shields were supplied, snow was picked up on the back

of the mold plates and carried into the trucks. The square-nosed plough, fig. 5, was developed to overcome these objections. The front of this plough consists of two wedges. The main, or bottom wedge (a), with its cutting edge horizontally across the track, is a plane inclined upward and backward. Its purpose is to lift the snow. The upper, or vertical superimposed wedge (b) is set some distance back from the front edge and is either V-shaped for single track operation, fig. 6, or triangular for double track operation, fig. 7. The upper wedge throws clear of the track the snow which has been lifted by the bottom wedge. On single track ploughs the vertical wedge is placed centrally and snow is thrown to both sides of the track. On double track ploughs the vertical cutting edge is placed at the side of the plough so that all the snow is thrown to one side.

The advantages of the square nosed plough are obvious. The snow is lifted and thrown without being packed, and with greatly reduced side thrust to the plough. Many modern ploughs of this type have an additional feature known as the drop nose. This consists of a plate hinged to the front of the bottom, or lifting, plane in such manner that it

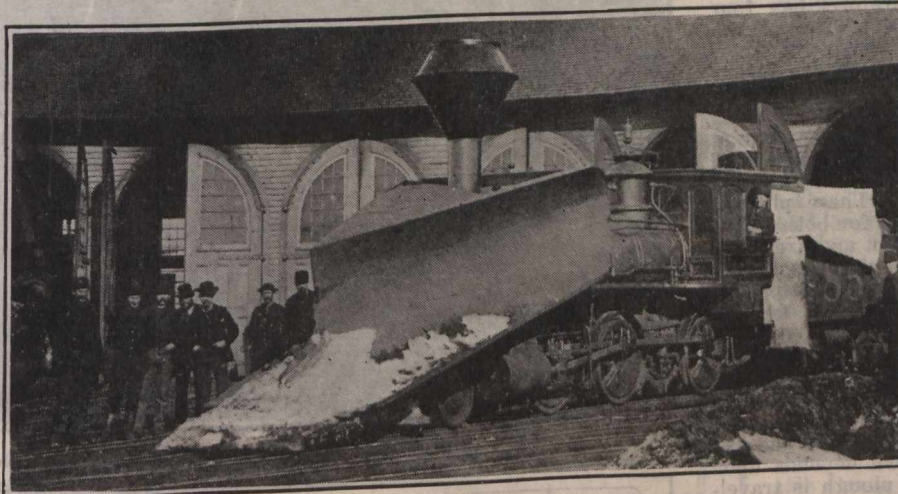


Fig. 1. One of the first locomotive snow ploughs.

the front of the pilot or filling between the slats with wood, thus converting an ordinary pilot into a makeshift snow plough. This arrangement has not always proved satisfactory, as the construction of pilots is not always sufficiently substantial to resist the strains imposed when ploughing. The pilot ploughs usually constructed consist of mold boards of steel plate securely fastened in front of and over the pilot, and braced to the front bumper and smoke box. These ploughs vary in size and shape. An early plough of such type is shown in fig. 2.

In moderate snows which do not pack hard or drift, and where the railway is free from deep cuts, and train operation is fairly frequent, locomotive and pilot ploughs are of great assistance in maintaining an open line. They are used on both freight and passenger locomotives.

Some types of modern pilot ploughs are shown in diagrammatic form in fig. 3. To obtain the greatest efficiency the angle formed by the mold plates should be fairly acute so that snow will slide aside instead of being pushed along in front of the plough.

**Push Ploughs and Wing Ploughs.**—A push plough is a self contained unit, con-

may be brought down between the rails, removing the snow to a depth of two or three inches. The nose is ordinarily operated by means of either hand levers or by compressed air cylinders controlled from the cupola of the plough. Fig. 8 shows some various types of push and wing ploughs.

**Russell Plough.**—One well known push plough is the Russell design. This plough, figs. 9 and 10, is of the square nosed type and is generally built of strong timbers reinforced with structural steel. The framing on which the mold boards are laid has as its main feature a heavy timber called the "back bone." Power is applied directly to the front of the plough through a steel reinforced timber bar, hinged or pivoted to the "back bone." This bar extends between the two center sills the entire length of the car frame. At its rear end the coupler is attached. A 4 in. clearance on each side of the bar permits sufficient lateral movement for adjustment on curves. This method of transmitting power directly to the front of the plough is said to be responsible for the claim that Russell ploughs are seldom derailed. On account of the heavy pressure on the front of the square nosed plough, the Russell design is fitted with a front truck which has journal bearings on each side of each wheel. Each axle, therefore, has four journals. The surfaces of the plough which come in contact with the snow have been developed to minimize resistance. The back end of the car is several inches narrower than the front, in order to relieve the car of snow friction against its sides. The top of the plough is fitted with a cupola or lookout from which its operation is controlled. These ploughs are made in several sizes for both single and double track operation and are often equipped with elevator wings and flangers. The wings of the Russell plough are of the elevator type. The face of each wing is formed into two concave chutes called elevators. These chutes slope upward at an angle of approximately 30 deg. This type of wing first loosens the snow at the side of the cut and then carries it up and out. The distance the snow is thrown depends upon the speed at which the plough is traveling. These wings are forced out into position by means of gearing operated within the car. When not in use these wings fit into recesses in the side of the car.

**Fuller Plough.**—Another style of push plough is that designed by the Union Pacific Rd. and known locally as the Fuller plough, see fig. 11. The framing is 30½ ft. over end sills, and is composed principally of wood. The side sills are 12 in. by 13 in. members. The center sill is 12 x 12 in., and the two intermediate sills are each 6 x 8 in. The end sills are 12 x 16 in., and the entire frame, in addition to being mortised and tenoned, is braced by brackets and held together by ¾ in. bolts. In addition, the coupler castings at each end are connected by two 1½ in. diameter rods, extending the entire length of the frame and passing through the 12 x 24 in. body bolsters. At the front end of the frame is a system of bracing that supports the steel plough. The steel mold plate, 11 ft. wide, is of the square nosed type, the vertical wedge and the horizontal wedge being constructed of continuous 3/16 in. plate, in order to eliminate angles, joints and riveting at the junction of the two wedges. At the nose the mold plate is radiused downward. For 3 ft. back of the lower cutting edge, the framing under the nose is filled solid with wood, se-



Fig. 2. An early form of locomotive pilot snow plough.

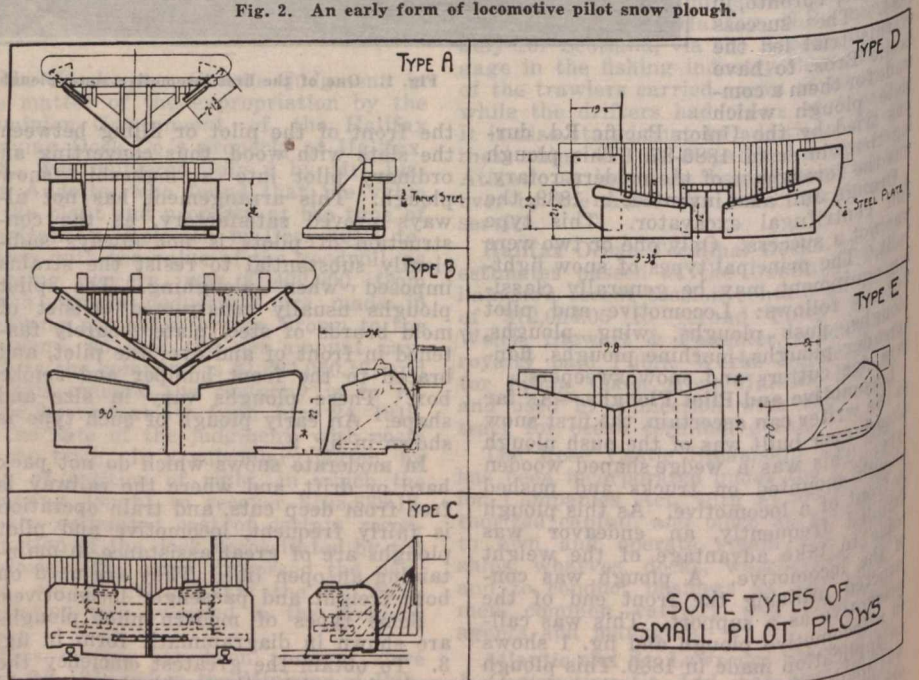


Figure 3.

curely bolted. The nose piece is a triangular steel bar over which the cutting plate is placed. The front end of the plough, when depressed, is carried

on cast iron shoes. These slide along the rail and are arranged so they can be readily replaced in case of breakage. The sides below the mold plates are carried

SOME TYPES OF SMALL PILOT PLOWS

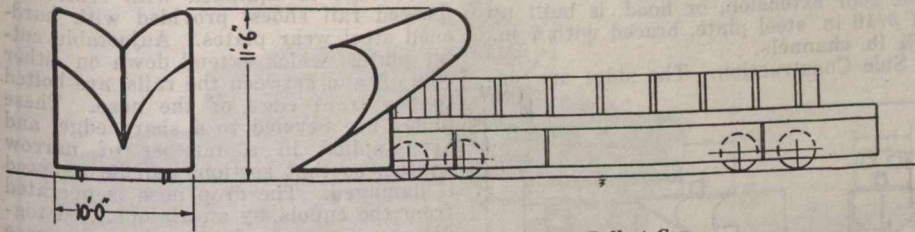


Fig. 4. Snow Plough, attached to Ballast Car.

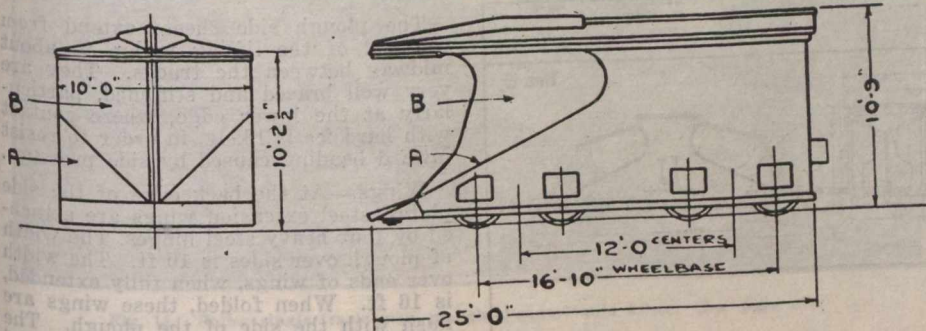


Fig. 5. Push Snow Plough, plain.

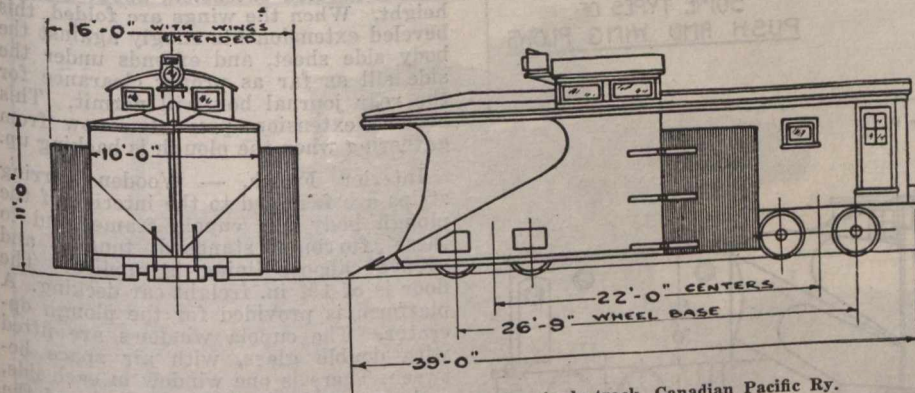


Fig. 6. Push Snow Plough, wing type, for single track, Canadian Pacific Ry.

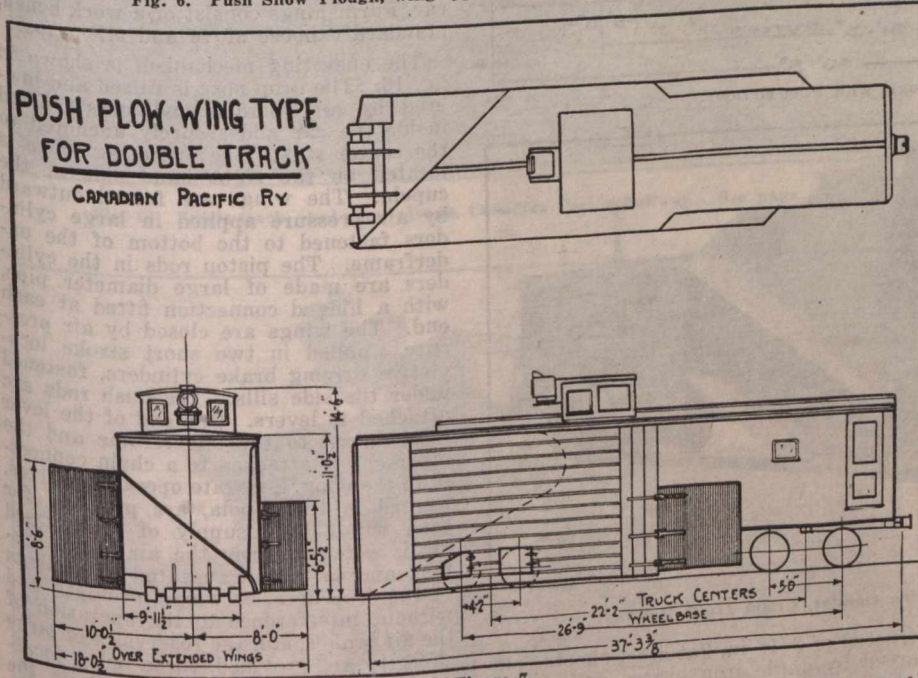


Figure 7.

down to within 8½ in. of the rail, in order to prevent snow crowding in under the front truck. The bottom portion is hinged to facilitate truck inspection. The car is of the ordinary box type, equipped with doors and windows, and has at the front end a small cupola, with seats for accommodation of the operator. All devices for the operation

of the plough are located in this cupola. Over the rear truck is a large box, filled with blast furnace slag to weigh down the back end. The ploughs are fitted with a flanger but have no wings. They have been built for single and double track in operation, the only difference being in the construction of the mold plates and the plough framing.

**Canadian Pacific Railway Steel Plough.** For many years the C.P.R. has built its ploughs of steel. It was the first railway to build and use an all-steel plough. The service given by this type has been very satisfactory. The all-steel plough has a number of advantages, including greater strength, lower maintenance cost, and affords greater protection to the men operating it. These steel ploughs have been built for both single and double track operation, and are equipped with drop nose, wings, and in some instances with ice cutters and flangers similar to those applied to rotary snow ploughs, all devices being controlled from the cupola. Two styles of ploughs have been built. The type shown in fig. 12 is used in territory where light, dry snows are frequent. On this type the roof extends forward over the mold plates to prevent snow flying upward. The other type shown in fig. 13 does not have the extension roof and is used where snows are usually wet and heavy. Fig. 14 shows a double track all steel plough, and fig. 15 a general arrangement drawing of the single track type.

**Trucks.**—The rear truck is of the standard arch bar freight type, with 33 in. diameter cast iron wheels mounted on 4¼ in x 8 in. M. C. B. axles. It is equipped with Simplex truck bolsters, M. C. B. coil springs and roller side bearings. The wheel base is 5¼ ft. The front truck is a special design of arch bar type, with 28 in. diameter steel tired wheels mounted on 5 x 9 in. M. C. B. axles. Simplex truck bolsters are used, the ends of which are fitted with a combination roller and wedge lateral motion device. This truck has no springs, the space usually occupied with springs being fitted with a wooden block. The first front trucks used under these ploughs had no lateral motion arrangement, and the wheels were mounted on locomotive truck axles with inside journals. The bearings and boxes were, therefore, practically inaccessible, except when the plough was standing over a pit. This resulted in numerous hot journals. Occasionally the arch bars bent sidewise, indicating the need of some lateral motion to prevent excessive side strain when the ploughs were passing through sharp curves and guided by the flanged wearing shoe. The present truck, with outside journals, and with lateral motion device, has overcome these troubles.

**Brakes.**—The rear truck only is equipped with brakes. The air brake consists of a schedule K. D. 812 equipment; the brake pipe extends the full length of the plough with standard angle cock and hose at the rear. On the front end of the pipe an angle cock is located behind the mold plate. Access to it is had through a small hinged door in the mold plate and connection is made by means of a special length of air hose. The hand brake is the ordinary standard box car type.

**Draft Attachment.**—The rear end is equipped with draft gear. At the front a standard pilot coupler is supported in a large steel casting riveted to the sloping front of the plough.

**Underframe.**—The center sills consist of two 15 in., 33 lb. rolled steel channels, with top and bottom cover plates. The side sills are 15 in., 33 lb. channels. The bolsters are box section, consisting of pressed plate diaphragms, with top and bottom cover plates. Approximately 6 ft. back of the center of the front truck is a very strong cross strut, consisting of two 15 in., 22 lb. channels applied horizontally to the top and bottom of

the center sills. The strut extends entirely across the plough.

Front End Frame.—The center end post consist of two 15 in., 33 lb. channels, which extend from the top of the

and about midway between the trucks. The roof extension, or hood, is built up of 3/16 in. steel plate, braced with 7 in., 9 3/4 lb. channels.

Side Construction.—The sides are con-

front edge is equipped with removable flanged rail shoes, provided with hardened steel wear plates. Adjustable cutter plates, which extend down on either side of, and between the rails, are bolted to the front edge of the nose. These plates are beveled to a sharp edge, and are applied in a number of narrow widths, so that sections can be renewed if damaged. The drop nose is operated from the cupola by an air operated toggle arrangement placed under the nose frame.

The plough side sheets extend from the end of the lifting wedge to about midway between the trucks. They are very well braced and stiffened, particularly at the lower edge, where contact with hard ice is likely, in order to resist inward bending caused by side pressure.

Wings.—At the back edge of the side plates, steel extension wings are attached by four heavy steel hinges. The width of plough over sides is 10 ft. The width over ends of wings, when fully extended, is 16 ft. When folded, these wings are flush with the side of the plough. The outer edges of the wings are provided with a beveled extension, about 4 ft. in height. When the wings are folded, this beveled extension fits snugly against the body side sheet, and extends under the side sill as far as proper clearance for the rear journal box will permit. This beveled extension prevents snow from gathering when the plough is backing up.

Interior Finish. — Wooden furring strips are fastened to the interior of the plough body and cupola frame, and to these furrings standard tongue and groove caboose lining is applied. The floor is of 1 3/4 in. freight car decking. A platform is provided for the plough operator. The cupola windows are fitted with double glass, with air space between. There is one window in each side, and one at the back of the body of the car. Furnishings consist of a work bench, standard caboose stove and oil lamps.

The operating mechanism is shown in fig. 16. The drop nose is raised and lowered by air operated cylinders located inside the car and securely anchored to the center sills. The operating valve is located on the right hand side of the cupola. The wings are forced outward by air pressure applied in large cylinders fastened to the bottom of the underframe. The piston rods in the cylinders are made of large diameter pipe, with a hinged connection fitted at each end. The wings are closed by air pressure, applied in two short stroke locomotive driving brake cylinders, fastened under the side sills. The push rods are attached to levers. One end of the lever is anchored to the underframe and the other end is attached to a chain connected to the wing. Separate operating valves, located in the cupola, are provided for each wing. The supply of compressed air is obtained from the air brake system, and to permit repeated movements of the drop nose, or wings, promptly and without interference to the operation of the air brakes, storage reservoirs of large capacity are provided, these being located inside of the car. In front of the cupola, on a platform, is an electric headlight. Current for this light is obtained from the locomotive headlight set through a suitable extension cord.

This article will be continued in next issue of Canadian Railway and Marine World. Additional illustrations alluding to the article appear on pages 473, 474 and 475.

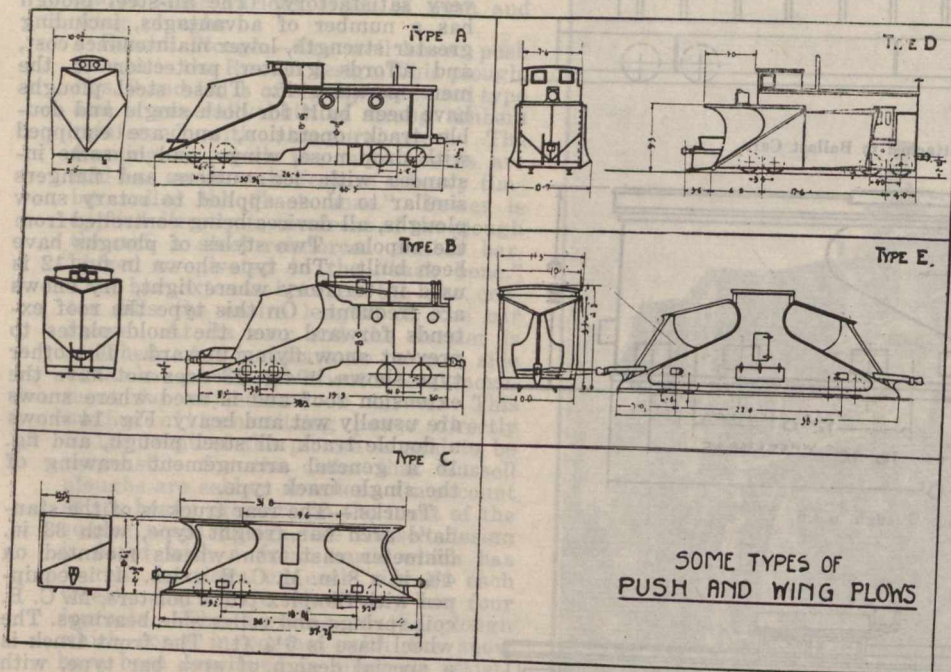


Figure 8.

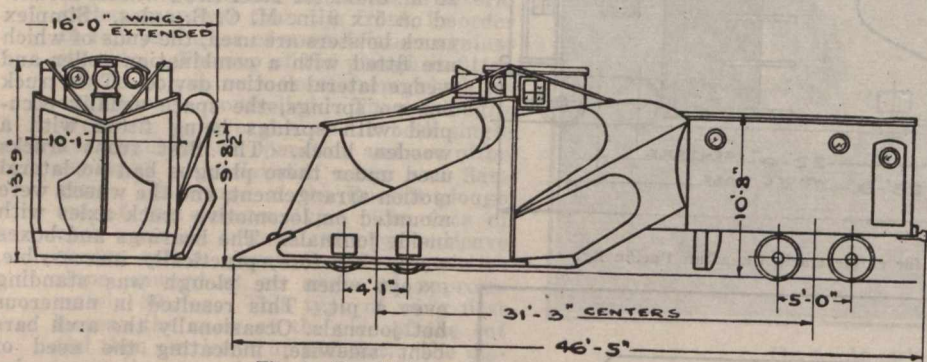


Fig. 9. Russell Snow Plough, with wing elevator.

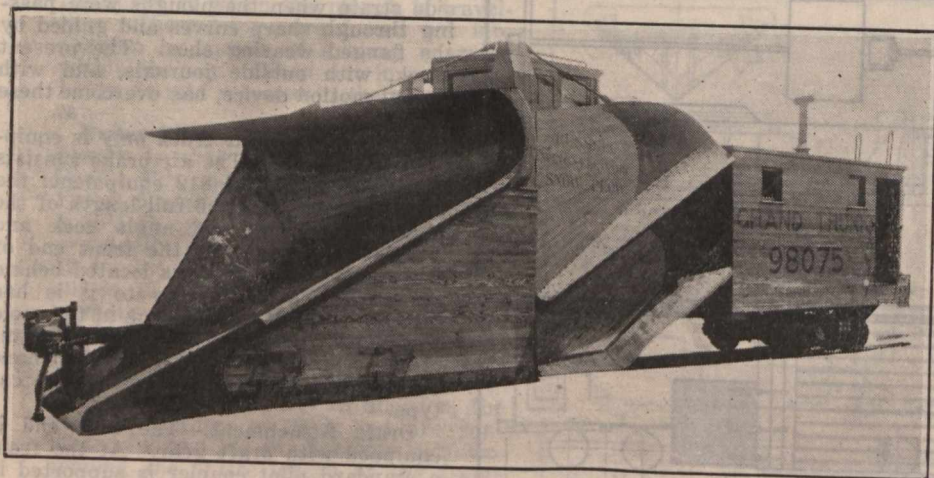


Fig. 10. Russell snow plough, with wing elevator, Grand Trunk Railway.

center sills, at a point just back of the front center plate, to the roof. The center of the bottom, or lifting wedge, is supported by two 10 in., 20 lb. channels, riveted to the front end of the center sill channels, and to the center end posts. The sides of the lifting wedge are supported by two 10 in., 20 lb. channels. These are supported by the front bolsters and extend diagonally upward and toward the rear to a point near the roof

constructed of 3/16 in. flat steel sheets reinforced by angle iron braces and posts.

End Construction.—The ends are constructed of 3/16 in. flat steel sheets. Attached to the side frames are heavy corner angles extending from the bottom of the side sills to the top of the side plate.

The cupola consists of a steel frame made of plates and angles.

The drop nose consists of a heavy plate, carried on large cast steel hinges. The

## Electrification of Montreal Harbor Terminal Railway.

Canadian Railway and Marine World for October, 1919, contained some preliminary particulars about the electrification of the Montreal Harbor Commissioners' Terminal Railway, of which the following is a more extended description, from the Commissioners' report for 1919, issued recently:—

The Montreal harbor railway terminals consist of surface lines situated between Victoria Bridge and the Imperial Oil wharf, having a total trackage of 58 miles. During the summer of 1918, nine steam locomotives were in operation, and it was seen that if the service was to be maintained to its highest efficiency additional locomotives would be required to avoid congestion. Important electrified freight terminals were visited, and conditions closely studied, with a view of adopting the best system for the Montreal harbor terminals.

Electrification for freight yards and terminals has been found very economical and satisfactory in every way, electric locomotives being considerably more efficient than steam locomotives, especially during winter. In view of the climatic conditions, and the highly successful operation of the Canadian National Rys. lines through the Montreal tunnel terminals, which have a 2,400 volts direct current overhead system in use, a similar system was considered for the Montreal harbor terminals, and plans and other necessary details were at once got under way for laying out the work, in order that the minimum amount of time would be lost in getting the electric locomotives running. Plans and specifications were sufficiently advanced in July, 1919, to call for tenders for the material, the work being carried out by the electrical department. The work was subdivided into four main sections as follows:—1. Power station machinery equipment. 2. Control, protective and signal equipment. 3. Overhead catenary line material. 4. Rail bonding material. Sufficient material necessary for a start was received during Sept., 1919, and a commencement was made in the latter part of that month. Construction was carried on steadily throughout the winter on the overhead line work, as well as the track, it being found more advantageous to erect this material when the traffic conditions on the system were the least congested.

The Power Station is designed for an ultimate capacity of three 1,000 k.w. motor generator sets, the units having a very heavy overload capacity for a short period to meet railway conditions, and capable of carrying 250% load for five minutes. Each set will consist of a 3-piece unit, consisting of a 1,500 h.p. 2,300 volt 3-phase, 60 cycles, 720 r.p.m. synchronous motor, direct connected to a 500 k.w. 1,200 volt, 720 r.p.m. compound wound, d.c. generator on either end, each generator being permanently connected in series giving a 1,000 k.w. at 2,400 volts. Exciters for the synchronous motor and generator fields are mounted on the same bedplate. Each of the motor generator sets, when mounted upon its frame, will weigh 40 tons, and cover a floor space of 28 x 8 ft., and approximately 7 ft. high. Water-cooled, oil insulated power transformers of 2,000 k.v.h. will be installed, taking the power at the incoming lines, voltage of 11,000 volts and stepping it down to 2,300 a.c. for the synchronous motors. These transformers when in

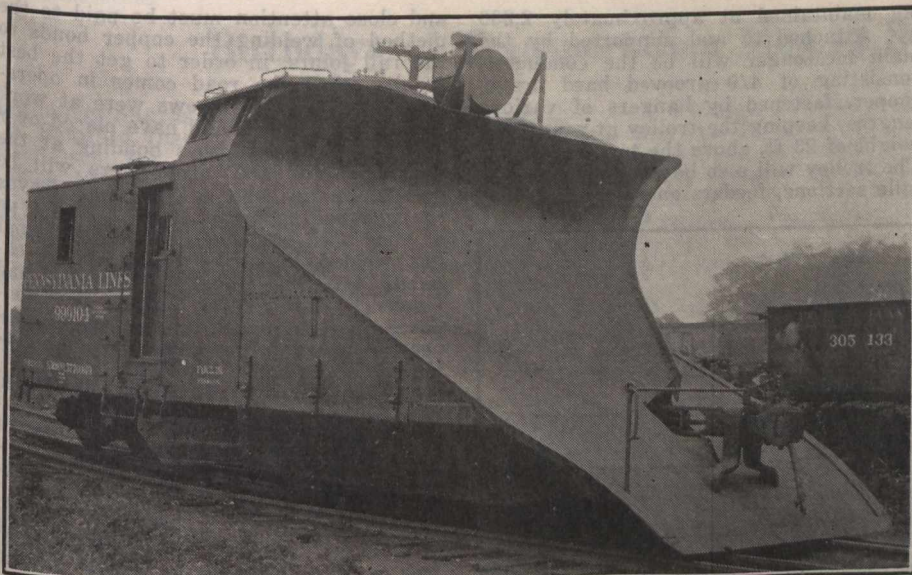


Fig. 11. Fuller single track snow plough, Pennsylvania Lines. See page 470.



Fig. 12. Single track, steel snow plough, Canadian Pacific Railway. See page 471.



Fig. 13. Single track, steel snow plough, Canadian Pacific Railway. See page 471.

service will weigh approximately 30 tons each.

The switchboards, cell, remote control, oil switches and protective equipment will be mounted on galleries on the second floor, and will consist of 21 marble panels, with indicating mechanism for the complete control of the generator sets, quick acting breakers, storage bat-

ing maintained at approximately 2,300 lb. Attached to and supported by the main messenger will be the conductor, consisting of 4/0 grooved hard drawn copper, fastened by hangers of various lengths, keeping the trolley at a uniform height of 23 ft. above the top of the rail. The trolley will also be anchored in half-mile sections, feeders energizing the sec-

and close attention must be paid to the method of welding the copper bonds to the rail joints, in order to get the best results when the road comes in operation. Two bonding crews were at work through the winter and have placed over 7,000 bonds. The cross bonding at the switch points and cross-overs will be carried on as soon as the frost leaves the ground (spring of 1920). The type of bond used is a steel armored terminal gas welded, copper stranded, bond, capacity 4/0, 7 in. long, cold pressed and headed. The welding outfits are composed of oxygen-acetylene cylinders, connecting to welding torches with regulating valves, flexible hose and gauges.

Steady progress is being maintained with all four sections of the construction, notwithstanding the difficulty of getting this special material, and a considerable amount of the work is well advanced.

**Seats on Locomotives.**—The Board of Railway Commissioners passed general order 302 July 23 as follows: Re general order 293, April 26, 1920, providing, inter alia, that all locomotives of railway companies subject to the board's jurisdiction be equipped with a seat for brakemen: Upon reading what is filed on behalf of the Brotherhood of Locomotive Engineers, the Brotherhood of Locomotive Firemen and Enginemen, and the Railway Association of Canada, it is ordered that paragraph 1 of general order 293 be amended by adding thereto the following, viz.: "Provided, however, that such seat shall not be located in a position that will interfere with the seating space or seats provided for engineer and firemen, or that will obstruct their view from side windows."

**Railway Lands Patented.**—Letters patent were issued during July for Dominion railway lands in Manitoba, Saskatche-



Fig. 14. Double track, steel snow plough, Canadian Pacific Railway. See page 471.

teries, power transformers and exciters.

The overhead line equipment will consist of cross span and bracket construction supporting the main messenger, which will be 7/16 in. extra galvanized Siemens-Martin steel cable anchored in half-mile sections. The anchor poles will

be used where development is not completed, these poles being Western cedar timber, varying in length from 40 to 65 ft., as conditions demand. The poles will be butt treated with hot carbolineum as a preservative,

and should give long life. Steel poles will be used when permanent conditions exist, the poles being set in concrete carried well above the ground level. The rail bonding, while not a very noticeable part of the installation is, however, a highly important section of the system. All the return current must get back to the power station by the rails,

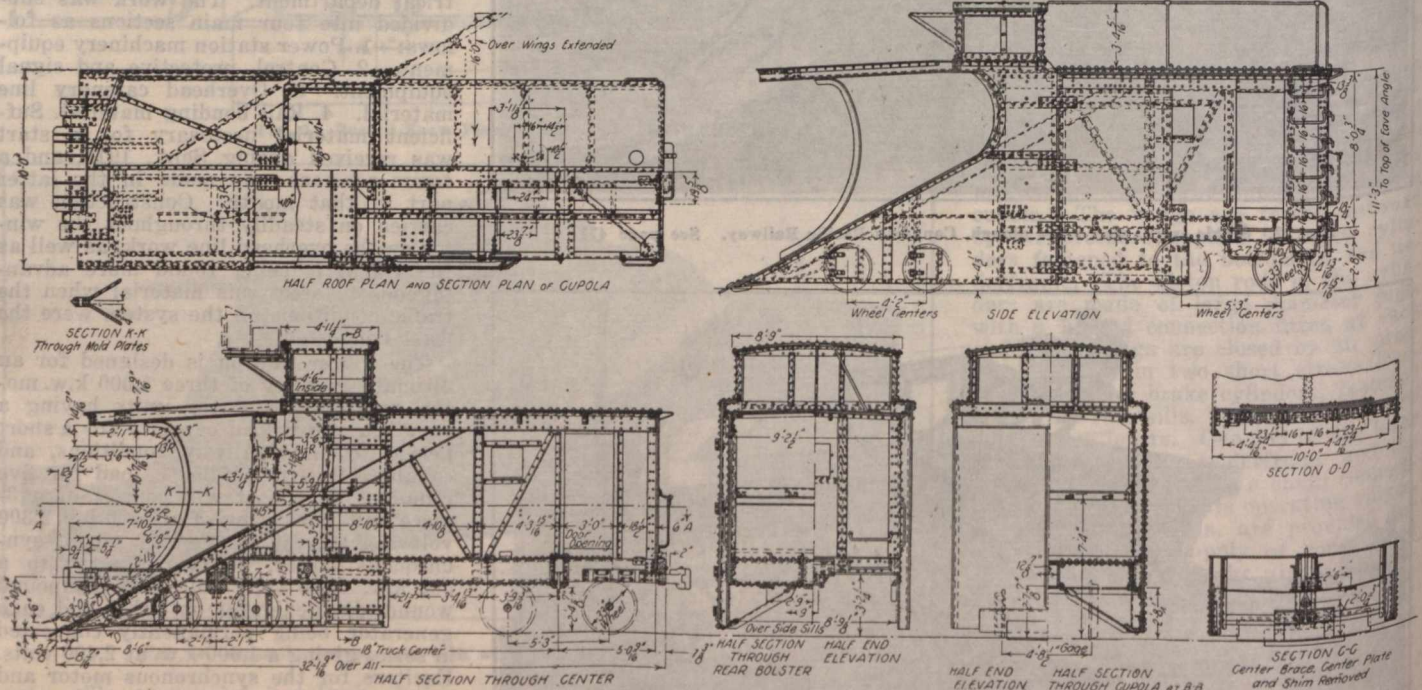


Fig. 15. General arrangement, single track snow plough, C.P.R. See page 471.

be very heavily guyed in all directions. The cross spans will be supported by wooden and steel poles at spacings of 150 ft. on tangent double track, and 120 ft. or 105 ft., as conditions require on curves or yards.

Cross-span messengers will consist of 5/16 in. high strength galvanized steel cable, the tension on all messengers be-

ing maintained at approximately 2,300 lb. Attached to and supported by the main messenger will be the conductor, consisting of 4/0 grooved hard drawn copper, fastened by hangers of various lengths, keeping the trolley at a uniform height of 23 ft. above the top of the rail. The trolley will also be anchored in half-mile sections, feeders energizing the sec-

and should give long life. Steel poles will be used when permanent conditions exist, the poles being set in concrete carried well above the ground level. The rail bonding, while not a very noticeable part of the installation is, however, a highly important section of the system. All the return current must get back to the power station by the rails,

wan, Alberta and British Columbia, as follows:—		Acres.
Alberta & Great Waterways Ry.....		6.20
Canadian Northern Ry.....		158.00
Canadian Northern Western Ry.....		.83
Canadian Pacific Ry.....		6.65
Edmonton, Dunvegan & British Columbia Ry.....		.25
Grand Trunk Pacific Ry.....		99.91
Total . . . . .		271.84

## Birthdays of Transportation Men in September.

Many happy returns of the day to:—  
 W. B. Bamford, District Freight Agent, C.P.R., Nelson, B.C., born at Belleville, Ont., Sept. 10, 1863.  
 O. E. Becker, Chief Dispatcher, Canadian National Railways, Saskatoon, Sask., born at Montreal, Sept. 20, 1873.  
 G. T. Bell, Passenger Traffic Manager, G.T.R., Montreal, born there, Sept. 7, 1861.  
 W. H. Biggar, K.C., Vice President and General Counsel, G.T.R. and G.T.P.R., Montreal, born at The Carrying Place, near Trenton, Ont., Sept. 19, 1852.  
 E. J. Blais, Foreman Tinsmith, Canadian National Rys., Transcona, Man., born Sept. 26, 1876.  
 V. T. Boughton, Assistant Superintendent, Chapleau Division, Algoma District, C.P.R., Chapleau, Ont., born at Troy, N.Y., Sept. 9, 1888.

Ocean Services Ltd., Chicago, Ill., born at London, Eng., Sept. 10, 1877.  
 H. G. Foreman, Assistant Treasurer, Canadian Northern Ry. System, Toronto, born there, Sept. 2, 1882.  
 C. B. Foster, Assistant Passenger Traffic Manager, Eastern Lines, C.P.R., Montreal, born at Kingston, N.B., Sept. 30, 1871.  
 G. J. Fox, Superintendent, Calgary Division, Alberta District, C.P.R., Calgary, Alta., born at Montreal, Sept. 24, 1883.  
 W. H. Gordon, Trainmaster, C.P.R., Field, B.C., born at Montreal, Sept. 21, 1875.  
 R. S. Gosset, Auditor of Disbursements, Canadian Northern Ry., Toronto, born there, Sept. 28, 1879.  
 E. Goulet, Agent, C.P.R., New Westminster, B.C., born at Quebec, Que., Sept., 1865.

Eastern Lines, C.P.R., Montreal, born at Brantford, Ont., Sept. 26, 1868.  
 C. D. MacKintosh, Superintendent, Lethbridge Division, Alberta District, C.P.R., Lethbridge, Alta., born at Auckland, New Zealand, Sept. 24, 1882.  
 W. A. Mather, General Superintendent, Saskatchewan District, C.P.R., Moose Jaw, born at Oshawa, Ont., Sept., 1885.  
 M. B. Murphy, Manager, Winnipeg Joint Terminals, Winnipeg, born at Napa, Cal., Sept. 11, 1866.  
 J. Paul, District Freight Agent, Canadian National Rys., Winnipeg, born in Euphrasia Tp., Ont., Sept. 13, 1858.  
 W. J. Pickrell, Master Mechanic, New Brunswick District, C.P.R., St. John, born at London, Ont., Sept. 15, 1880.  
 H. T. Rawlings, Lake Forwarding Agent and Fuel Inspector, Canadian National Rys., Cleveland, Ohio, born at

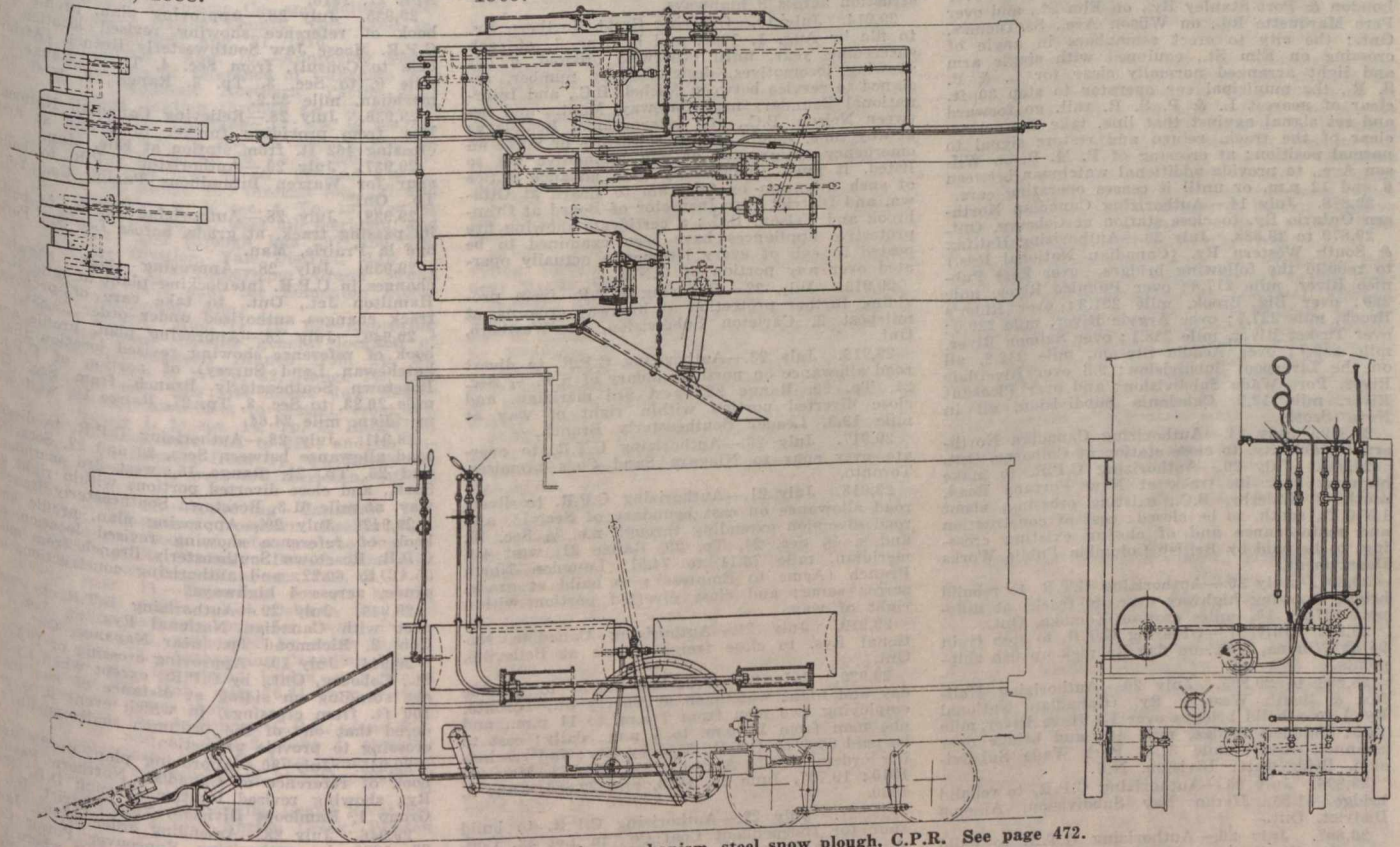


Fig. 16. Arrangement, operating mechanism, steel snow plough, C.P.R. See page 472.

E. R. Bremner, ex-Division Freight Agent, Ottawa Division, G.T.R., Ottawa, born at Toronto, Sept. 9, 1875.  
 W. B. Bulling, ex-Assistant Freight Traffic Manager, Eastern Lines, C.P.R., now of Knowlton, Que., born at Montreal, Sept. 16, 1858.  
 W. E. Burke, Director of Operation, Canada Steamship Lines, Ltd., Montreal, born at Belleville, Ont., Sept. 23, 1881.  
 A. D. Cartwright, Secretary, Board of Railway Commissioners, Ottawa, born at Kingston, Ont., Sept. 30, 1864.  
 A. S. Dawson, Chief Engineer, Department of Natural Resources, C.P.R., Calgary, Alta., born at Pictou, N.S., Sept. 6, 1871.  
 H. B. Dufief, Assistant to Solicitor, Grand Trunk Pacific Ry., Winnipeg, born at Washington, D.C., Sept. 16, 1883.  
 W. E. Duperow, General Passenger Agent, Grand Trunk Pacific Ry., Winnipeg, born at Stratford, Ont., Sept. 4, 1872.  
 R. S. Elworthy, General Agent, Passenger Department, Canadian Pacific

A. Hector, Port Agent, Canadian Government Merchant Marine Ltd., Halifax, N.S., born there, Sept. 12, 1882.  
 W. B. Howard, District Passenger Agent, C.P.R., Toronto, born at Chatham, N.B., Sept. 15, 1877.  
 W. R. Howard, dispatcher, C.P.R., Brownville Jct., Me., born at St. Andrews, N.B., Sept. 14, 1871.  
 Lt. Col. J. E. Hutcheson, General Manager, Montreal Tramways Co., Montreal, born at Brockville, Ont., Sept. 15, 1858.  
 G. C. Jones, Assistant to President, G.T.R., Toronto, born at Clyde, N.Y., Sept. 24, 1869.  
 C. B. King, Manager, London St. Ry., London, Ont., born at Galena, Ind., Sept. 12, 1871.  
 S. King, London, Ont., ex-director, National Steel Car Co., Hamilton, Ont., born at Thetford, Norfolk, Eng., Sept. 12, 1853.  
 C. C. Labrie, Purchasing Agent, Canadian National Rys., Vancouver, B.C., born at Quebec, Que., Sept. 8, 1882.  
 R. E. Larmour, General Freight Agent,

London, Eng., Sept. 27, 1883.  
 C. S. Richardson, District Freight Agent, C.P.R., Buffalo, N.Y., born at New York, Sept. 26, 1870.  
 W. D. Robb, Vice President, Transportation and Maintenance, G.T.R., Montreal, born at Longueuil, Que., Sept. 21, 1857.  
 A. Scott, Resident Engineer, Prince Edward Island Ry., Charlottetown, P.E. I., born at Kirkcaldy, Scotland, Sept. 6, 1884.  
 R. A. Sewell, Superintendent of Car Service, Eastern Lines, C.P.R., Montreal, born at Brampton, Ont., Sept. 2, 1880.  
 J. M. Silliman, Engineer, Maintenance of Way, Susquehanna Division, Delaware & Hudson Rd., Oneonta, N.Y., born at Easton, Pa., Sept. 8, 1885.  
 F. W. Sterling, District Freight Agent, C.P.R., Edmonton, Alta., born at Thornbury, Ont., Sept. 13, 1879.  
 H. A. Young, formerly with Ontario Storage & Cartage Co., Ltd., Toronto, now of Buffalo, N.Y., born at Brooklyn, N.Y., Sept. 1, 1864.

## 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.

Important traffic orders made by the Board are given in full on another page of this issue.

General order 301. July 22.—Prohibiting, on and after Aug. 1, the exportation of coal from the Atlantic, St. Lawrence River and Gulf ports of Canada, except to the U.S. or Newfoundland, unless otherwise permitted and in accordance with regulations to be promulgated by the board.

General order 302. July 23.—Amending par. 1 of general order 293, Apr. 26, re brakemen's seats on locomotives. This order is given fully on another page.

29,874. July 19.—Authorizing C.P.R. to rebuild bridge 17.1 over Spuzzum River, Cascade Subdivision, B.C.

29,875. July 19.—Authorizing C.P.R. to rebuild bridge 45.5, Crowsnest Subdivision, Lethbridge Division, Alta.

29,876, 29,877. July 15.—Authorizing City of St. Thomas, Ont., for three months from date, to operate pay as you enter, one man cars over London & Port Stanley Ry., on Elm St., and over Pere Marquette Rd., on Wilson Ave., St. Thomas, Ont.; the city to erect semaphore in angle of crossing on Elm St., equipped with single arm and light arranged normally clear for L. & P. S. R., the municipal car operator to stop 30 ft. clear of nearest L. & P. S. R. rail, go forward and set signal against that line, take car across, clear of the track, return and restore signal to normal position; at crossing of P. M. R. on Wilson Ave., to provide additional watchman between 6 and 12 p.m. or until it ceases operating cars.

29,878. July 14.—Authorizing Canadian Northern Ontario Ry. to close station at Cobourg, Ont.

29,879 to 29,888. July 20.—Authorizing Halifax & South Western Ry. (Canadian National Rys.) to rebuild the following bridges,—over East Pubnico River, mile 217.8; over Pubnico River, mile 220; over Big Brook, mile 221.3; over Rider's Brook, mile 227.7; over Argyle River, mile 229.6; over Tusket River, mile 238.1; over Salmon River, mile 239.7; over Acadia Stream, mile 242.8, all on the Liverpool Subdivision; 9.8 over Riverdale River, Port Wade Subdivision; and over Pleasant River, mile 12.5, Caledonia Subdivision, all in Nova Scotia.

29,889. July 14.—Authorizing Canadian Northern Ontario Ry. to close station at Colborne, Ont.

29,890. July 20.—Authorizing C.P.R. to make highway over its track at New Fortune Road, south of Enderby, B.C., existing crossing, about 1,570 ft. south, to be closed; cost of construction and maintenance and of closing existing crossing, to be paid by British Columbia Public Works Department.

29,891. July 20.—Authorizing G.T.R. to rebuild bridge carrying highway over its tracks at milepost 127.98, 1 3/4 miles east of Komoka, Ont.

29,892. July 17.—Ordering G.T.R. to stop train 95 at Winona, Ont., on flag, to pick up fish shipments.

29,893 to 29,895. July 20.—Authorizing Halifax & South Western Ry. (Canadian National Rys.) to rebuild bridges over La Have River, mile 18.2; Feindels bridge, mile 18; and bridge over Shannon River, mile 37.5, Port Wade Subdivision, Bridgewater Division, N.S.

29,896. July 20.—Authorizing C.P.R. to rebuild bridge 41.85, Heron Bay Subdivision, Algoma District, Ont.

29,897. July 20.—Authorizing G.T.R. to build spur for the Seaman, Kent Co., Toronto, Ont.

29,898. July 20.—Authorizing C.P.R. to rebuild bridge 29.89, North Bay Subdivision, Algoma District, Ont.

29,899. July 14.—Approving agreement, June 24, between Bell Telephone Co. and Ross Telephone Co., Algoma District, Ont.; and rescinding order 27,398, July 6, 1918.

29,900, 29,901. July 13, 20.—Authorizing C.P.R. to rebuild bridges 276, Govenlock Subdivision, Sask., and 27.7, on Walkerton Subdivision, Ont.

29,902. Aug. 4.—Authorizing Lac du Bonnet rural municipality, Man., to carry highway over C.P.R. spur in n.w. 1/4 Sec. 17, Tp. 15, Range 11, east principal meridian, Man.

29,903. July 20.—Approving agreement, June 24, between Bell Telephone Co. and Rydall Ban-Plummer Telephone Co., Algoma District, Ont.; and rescinding order 27,391, July 3, 1918.

29,904. July 13.—Approving agreement, Apr. 29, 1915, between Bell Telephone Co. and Eldon Union Telephone Association, Victoria and Ontario Counties, Ont.

29,905. July 13.—Authorizing Canadian Northern Pacific Ry. to build spur for North River Lumber Co., near Thunder River, B.C.

29,906. July 14.—Authorizing C.P.R. to build three spurs for Prest-O-Lite Co. of Canada, Toronto, and to cross under Toronto & Niagara Power Co.'s wires; spurs to be completed within three months from date.

29,907. July 13.—Approving plan and specifications of Tilbury Tp., Ont., showing character of work on Baptiste Creek, or Big Creek, drain, under G.T.R.

29,908. July 14.—Approving agreement, June 30, between Bell Telephone Co. and Zorra Telephone Co., Oxford County, Ont.; and rescinding orders 7,059, May 22, 1909, and 24,074, Aug. 11, 1915.

29,909. July 13.—Authorizing C.P.R. to rebuild bridge 28.6, Nakusp Subdivision, B.C.

29,910. July 14.—Approving plan, profile and book of reference combined, showing revised location (Alberta Land Survey), of portion of C.P.R. Langdon North Branch (Acme to Empress) from Sec. 18, Tp. 29, Range 22, at mile 59.94, to Sec. 7, Tp. 29, Range 20, west 4th meridian, at mile 75.73.

29,911. July 23.—Ordering C.P.R. forthwith to restore daily service between Nelson and Slokan, B.C., pending compliance with requirements as to notice of circular 139, Jan. 13, 1915, and such action by the Board, if any, as it shall deem necessary.

29,912. July 19.—Extending for three months from date time within which C.P.R. shall erect new station at Islington, Ont.

29,913. July 14.—Approving Canadian National Rys. plan and profile showing location through Tps. 26 and 25, Ranges 1 and 2, west 4th meridian, Alta.; and authorizing its construction across 8 highways.

29,914. July 19.—Ordering Great Northern Ry. to file by Aug. 1, 1920, and by Apr. 1, of each succeeding year, until otherwise ordered, a list showing locomotives, designated by number, assigned to service between Michel, B.C., and International Boundary near Gateway, Mont.; and between Nelson, B.C., and International Boundary; at any time, should G.N.R. substitute or make an emergency assignment of any locomotive not so listed, it must immediately give advance notice of such intention by telegram to Board at Ottawa, and District Fire Inspector of Board at Cranbrook and Nelson, B.C.; a certificate showing fire protective appliances have been examined to be posted in cab of every locomotive actually operated over any portion of G.N.R.

29,915. July 22.—Relieving C.P.R. from providing further protection at highway crossing at milepost 2, Carleton Subdivision, at Westboro, Ont.

29,916. July 23.—Authorizing C.P.R. to divert road allowance on north boundary of n.w. 1/4 Sec. 21, Tp. 20, Range 28, west 3rd meridian, and close diverted portion within right of way at mile 19.3, Leader Southeasterly Branch.

29,917. July 23.—Authorizing G.T.R. to operate over spur to Niagara Sand Co.'s premises, Toronto.

29,918. July 21.—Authorizing C.P.R. to divert road allowance on east boundary of Sec. 13, and road diversion extending through n.e. 1/4 Sec. 13, and s. 1/2 Sec. 24, Tp. 29, Range 21, west 4th meridian, mile 73.11 to 74.51, Langdon North Branch (Acme to Empress); to build at grade, across same; and close diverted portion within right of way.

29,919. July 21.—Authorizing Canadian National Rys. to close freight house at Belleville, Ont.

29,920. July 21.—Ordering G.T.R. to provide day and night watchmen at Cherry St., Toronto, employing two men from 7 a.m. to 11 p.m., and one man from 11 p.m. to 7 a.m., daily; cost to be paid 65% by G.T.R., 35% by city; and rescinding orders 10,099, Apr. 6, 1910; 10,768, May 23, 1910; 19,707, June 26, 1913, and 29,686, June 2, 1920.

29,921. July 22.—Authorizing C.P.R. to build spur for Independent Coal Co., in Lot 32, Con. A, Ottawa Front, Carleton County, Ont.

29,922. July 14.—Approving route map showing general location of Canadian Northern Saskatchewan Ry. line from Turtleford, mile 0, to Sec. 4, Tp. 48, Range 12, mile 68.7, Sask.

29,923. July 3.—Ordering G.T.R. to rebuild bridge over its tracks at Main St., Toronto, so as to make it 46 ft. wide, with sidewalks 10 ft. wide on each side, approach to be of earth or gravel up to standard provided under agreement of June 25, 1884; bridge to be decked with cement, upon which can be placed any surfacing City of Toronto decides to use; city to pay cost of surfacing both bridge and approaches and any necessary curbing, to have right to make bridge wider, but must pay cost of such additional width; bridge to be built by Sept. 30, 1921.

29,924. July 27.—Authorizing C.P.R. to build spur for Modern Flour Mills, Morden, Man.

29,925. July 22.—Ordering C.P.R. to build team track on west side main track at Nanton, Alta.; to be done within 30 days from date.

29,926. July 27.—Authorizing G.T.R. to connect with Canadian National Rys. on Lot 10, Con. 1, Brighton Tp., Ont.

29,927. July 27.—Authorizing C.P.R. to rebuild bridge 3.1 over Assiniboine River, at St. James, Man.

29,928. July 27.—Authorizing C.P.R. to build new crossing over its track 133 ft. south of south main line switch on East Railway Ave., Nanton, Alta.; existing crossing through railway yard to be closed; cost of road between points A and C, the crossing at C, and closing existing crossing to be paid 25% out of railway grade crossing fund, 25% by Town of Nanton, and 50% by

C.P.R.; maintenance of crossing to be paid by municipality.

29,929. July 27.—Extending for 60 days from July 20, time within which G.T.R. shall remove trees on northwest corner of crossing of Kingston Road, near West Hill, Ont., as directed by order 29,710, June 2.

29,930. July 30.—Suspending until further order, those portions of undermentioned schedules which would, on Aug. 2, abrogate existing inter-switching arrangements with Cornwall St. Ry., Light & Power Co., Cornwall, Ont.; C.P.R. supplement 6 to C.R.C. no. E-3668; G.T.R. supplement 5 to C.R.C. no. E-4073, and New York Central Rd. C.R.C., N.Y.C. 2139.

29,931. July 27.—Approving agreement, July 12, between Bell Telephone Co. and Montreal (Ontario) Telephone Co., Ontario County, Ont.

29,932. July 28.—Authorizing G.T.R. to operate siding for Carroll Bros., Humberstone Tp., Ont.

29,933. July 29.—Authorizing C.P.R. to build spur for Gas City Brick Co., Medicine Hat, Alta.

29,934. July 27.—Approving agreement, June 24, between Bell Telephone Co. and Aberdeen Plummer Center Line Telephone Association, Algoma District, Ont., and rescinding order 23,584, Apr. 21, 1915.

29,935. July 28.—Approving plan, profile and book of reference showing revised location of C.P.R. Moose Jaw Southwesterly Branch (Assiniboia to Consul), from Sec. 4, Tp. 4, Range 27, mile 0, to Sec. 3, Tp. 3, Range 23, west 3rd meridian, mile 32.2.

29,936. July 28.—Relieving Canadian National Rys. from providing further protection at first crossing 462 ft. from station at Elie, Man.

29,937. July 29.—Authorizing C.P.R. to build spur for Warren Bituminous Paving Co., York Tp., Ont.

29,938. July 28.—Authorizing C.P.R. to build its passing track, at grade, across Lee St., Portage la Prairie, Man.

29,939. July 28.—Approving plan showing changes in C.P.R. interlocking plant at mile 37.2, Hamilton Jct., Ont., to take care of proposed track changes authorized under order 29,838.

29,940. July 28.—Approving plan, profile and book of reference showing revised location (Saskatchewan Land Survey) of portion of C.P.R. Rosetown Southeasterly Branch from Sec. 27, mile 20.23, to Sec. 3, Tp. 27, Range 16, west 3rd meridian, mile 24.64.

29,941. July 28.—Authorizing C.P.R. to divert road allowance between Secs. 22 and 27, Secs. 25 and 26, Tp. 21, Range 15, west 3rd meridian, Sask., and close diverted portions within right of way, at mile 61.3, Rosetown Southeasterly Branch.

29,942. July 29.—Approving plan, profile and book of reference showing revised location of C.P.R. Rosetown Southeasterly Branch from mile 55.41 to 60.22, and authorizing construction, at grade, across 4 highways.

29,943. July 29.—Authorizing G.T.R. to connect with Canadian National Rys. on Lot 21, Con. 2, Richmond Tp., near Napane, Ont.

29,944. July 29.—Approving crossing of D'Arcy St., Cobourg, Ont., by C.P.R., except when trains are standing on siding at distance of less than 100 ft. from crossings, in which event it is ordered that one of the trainmen shall remain at crossing to provide protection.

29,945. July 30.—Approving plan, profile and book of reference of Canadian Northern Pacific Ry., showing revised location through D.L. 474, Group 1, Kamloops Division, Yale District, B.C.

29,946. July 28.—Amending order 29,307, Jan. 23, 1920, by authorizing Vancouver Power Co. to make changes in interlocking plant where its railway crosses New Westminster Southern Ry. at Cloverdale, B.C.; signals to be set normally at Vancouver Power Co. line and at danger on N. W. S. Ry.; interlocking plant to be operated by N. W. S. R. trainmen.

29,947. July 27.—Amending order 29,834, July 5, re Canadian National Rys. highway crossing at Winchester Ave., Fort Garry, Man.

29,948. July 29.—Approving agreement, June 24, between Bell Telephone Co. and Plummer Additional Tp., operating Plummer Additional & Lefroy Municipal Telephone Systems in Algoma District, Ont., and rescinding order 24,103, Aug. 19, 1915.

29,949. July 31.—Authorizing C.P.R. to divert road allowance between Secs. 17 and 18, Tp. 21, Range 18, now known as First St. East, Bassano, Alta.; to build diversion, at grade, across its tracks opposite Second St. West; and close diverted portion within right of way.

29,950. July 30.—Ordering C.P.R. to move automatic bell at highway two miles east of Belleville, Ont., to north side of road and close to track crossing, and to install wigwag signal in addition to bell there; work to be completed by Sept. 1.

29,951 to 29,953. July 31.—Approving Bell Telephone Co. agreements, June 24, with Plummer, Aberdeen and Galbraith Rural Telephone Association, Ltd., Algoma District, Ont., and rescinding order 23,244, Feb. 1, 1915; July 10, with Back Line Telephone Co., Dufferin County, Ont., and rescinding order 25,815, Jan. 23, 1917; and July 20, with South Norfolk Telephone Co., Norfolk County, Ont.



- 29,954, 29,955. July 30.—Authorizing Beauharnois municipality, Que., to make highway crossing over St. Lawrence & Adirondack Ry. on Jacques Cartier St., Ste. Cecile, Que., dismissing application to extend Saraille Road across St. L. & A. Ry. main line and siding on Lots 147 and 258, and authorizing crossing on Lot 258, at point 497.77 ft. farther north; also authorizing it to make crossing over G.T.R. on Lots 120 and 121, Ste. Cecile Jct., Que., change in interlocking plant to be paid for by municipality.
- 29,956. Aug. 4.—Authorizing Canadian National Rys. to build spur to gravel pit near Wiseton, Sask., and to cross and divert certain highways.
- 29,957. Aug. 5.—Authorizing C.P.R. to build passing track at grade across road allowance in Stoney Indian Reserve, Tp. 25, Range 7, at Morley, Alta.
- 29,958. Aug. 5.—Authorizing G.T.R. to build siding and spur for Canadian Industrial Alcohol Co., Corbyville, Ont.
- 29,959. Aug. 5.—Authorizing Canadian Northern Quebec Ry. to build siding extension across public road at St. Elizabeth, Que.
- 29,960. Aug. 5.—Approving agreement, July 21, between Bell Telephone Co. and Upper Admaston Telephone Co., Renfrew County, Ont., and rescinding order 25,942, Mar. 16, 1917.
- 29,961. Aug. 3.—Approving Canadian National Rys. plan showing additions to station grounds at Junkins, Alta.
- 29,962. July 31.—Approving agreement, July 22, between Bell Telephone Co. and Halton Telephone Co. Ltd., Halton County, Ont., and rescinding order 25,306, Aug. 21, 1916.
- 29,963 to 29,966. Aug. 10.—Approving plans, profiles and books of reference of Canadian National Rys. (Canadian Northern Pacific Ry.) showing revised location through s.e.  $\frac{1}{4}$  sec. 19, s.w.  $\frac{1}{4}$  sec. 19, Tp. 19, Range 14; s.e.  $\frac{1}{4}$  sec. 24, s.w.  $\frac{1}{4}$  sec. 24, n.w.  $\frac{1}{4}$  sec. 24, n.e.  $\frac{1}{4}$  sec. 24, s.w.  $\frac{1}{4}$  sec. 26, s.e.  $\frac{1}{4}$  sec. 27, n.e.  $\frac{1}{4}$  sec. 27, part of n.w.  $\frac{1}{4}$  sec. 27, and s.w.  $\frac{1}{4}$  sec. 24, Tp. 19, Range 15; through lots 297 and 296, G.I.; through s.w.  $\frac{1}{4}$  sec. 4, Tp. 19, n.w.  $\frac{1}{4}$  sec. 32, Tp. 18, Range 14, west 6th meridian, and D.L. 442, G.I.; and through lots 297 and 296, G.I., Kamloops Division, Yale District, B.C.
- 29,967. Aug. 11.—Authorizing Grand Trunk Pacific Ry. to build spur for Edmonton Stockyards Ltd., Edmonton, Alta.
- 29,968 to 29,970. Aug. 11, 10, 13.—Approving C.P.R. route maps showing general location of its Kelfield Southeastery Branch from Tp. 34, Range 10, mileage 0, to Tp. 32, Range 14, west 3rd meridian, mile 35.9; its Moose Jaw South-westerly Branch, Assiniboia to Consul, from sec. 6, Tp. 3, Range 1, to sec. 14, Tp. 3, Range 19, west 3rd meridian, mile 84.5 to 211; and its Asquith to Cloan Branch, from Tp. 36, Range 10, to Tp. 42, Range 20, west 3rd meridian, mile 0 to 84.2.
- 29,971. Aug. 11.—Approving Canadian National Rys. (Canadian Northern Pacific Ry.) plan, profile and book of reference showing revised location of its Okanagan Branch from mile 44.7 to 46.11, east from Kamloops Jct., B.C.
- 29,972. Aug. 11.—Extending for six months from date time within which Oshawa Ry. shall complete siding and two spurs for Pedlar People Ltd., Oshawa, Ont., authorized by order 29,414.
- 29,973. Aug. 12.—Authorizing Canadian Northern Ontario Ry. to rebuild bridge over Moira River, Madoc Tp., Ont., mile 76.84 from Picton, and to improve grade there.
- 29,974. Aug. 10.—Approving C.P.R. plans B-1-1597, July 23, and B-1-1595-2, June 4, showing proposed replacement of 60 ft. d.p.g. span by two 32 ft. reinforced concrete spans, at bridge 38.92 of Cartier Subdivision, Ont.
- 29,975. Aug. 12.—Authorizing Grand River Ry. to rebuild bridge 4 over Spring Creek, Preston Jct., Ont.
- 29,976. Aug. 12.—Authorizing Grand Trunk Pacific Branch Lines Co. to build spur for Burnt Mountain Lumber Co., on its Mountain Park Branch, in n.e.  $\frac{1}{4}$  Sec. 24, Tp. 43, Range 22, west 5th meridian, Alta.
- 29,977. Aug. 10.—Authorizing Boston & Maine R.R. to rebuild overhead highway bridge 95, 0.1 mile north of Smiths Mills station, Que.
- 29,978. Aug. 12.—Approving agreement, July 9, between Bell Telephone Co. and Colchester Telephone System, in Essex County, Ont., and rescinding order 24,047, July 26, 1915.
- 29,979. Aug. 12.—Authorizing Canadian Northern Pacific Ry. to build across Shuswap Ave., Lumby, B.C.
- 29,980. Aug. 10.—Authorizing C.P.R. to build spur for Lignite Utilization Board of Canada, near Bénéfais, Sask.
- 29,981. Aug. 11.—Ordering G.T.R., forthwith, to provide fruit shed and siding at Grimsby Beach station, Ont.; roadway leading to siding to be provided and maintained by North Grimsby municipality.
- 29,982. Aug. 11.—Approving Canadian National Rys. (Canadian Northern Pacific Ry.) plan, profile and book of reference showing revised location of its Okanagan Branch, mile 27 to 28, east from Kamloops Jct., B.C.
- 29,983. Aug. 10.—Extending to Sept. 30 time within which G.T.R. is required by order 29,746, Parkdale Ave., Ottawa, Ont.
- 29,984. Aug. 13.—Approving agreement, July 23, between Bell Telephone Co. and New Dundee Rural Telephone Co., Waterloo and Oxford Counties, Ont., and rescinding order 24,130, Aug. 26, 1915.
- 29,985. Aug. 13.—Approving C.P.R. route map, showing general location of its Rosetown to Keppel Branch, from Tp. 30, Range 15, mile 0, to Tp. 35, Range 13, west 3rd meridian, mile 37.2.
- 29,986. Aug. 13.—Approving Canadian Northern Pacific Ry. plan, profile and book of reference showing revised location of its Okanagan Branch from mile 31.5 east from Kamloops Jct., B.C., in Lot 475 G.1., Sec. 15, and n.e.  $\frac{1}{4}$  Sec. 10.
- 29,987. Aug. 14.—Approving agreement, July 26, between Bell Telephone Co. and Bexley Telephone Co., Victoria County, Ont.
- 29,988. Aug. 13.—Approving C.P.R. route map, July 14, showing general location of its Amulet to Dunkirk Branch, from Tp. 7, Range 21, to Tp. 12, Range 28, west 2nd meridian, mile 0 to 60.2.
- 29,989. Aug. 13.—Authorizing Grand Trunk Pacific Branch Lines Co. to build spur for McLeod Hard Coal Co., in s.w.  $\frac{1}{4}$  Sec. 25, Tp. 48, Range 22, west 5th meridian, on its Mountain Park Branch, Alta.
- 29,990. Aug. 13.—Approving C.P.R. plan showing proposed alterations to masonry to suit new reinforced concrete span crossing roadway at bridge 21.12, North Bay Subdivision, Algoma District, Ont.
- 29,991, 29,992. Aug. 14.—Approving Bell Telephone Co.'s agreements; July 2, with Arundel Development Co., Terrebonne, Argenteuil and Ottawa Counties, Que., and rescinding order 24,642, Jan. 10, 1916; and July 20, with Rutherglen Rural Telephone Co., Ltd., Nipissing District, Ont.
- 29,993. Aug. 13.—Authorizing C.P.R. to build its Lanigan Northeasterly Branch at grade across 23 highways between miles 47.80 and 84.82.
- 29,994. Aug. 17.—Amending order 29,756, June 15, re Esquivalent & Nanaimo Ry. bridge over Stamp River, B.C.
- 29,995. Aug. 12.—Approving Canadian National Rys. plan showing shelter to be built at Monkland Boulevard, near Lazard, Que.
- 29,996. Aug. 10.—Approving new location of the Canadian National Rys. station at Margo, Sask.
- 29,997. Aug. 10.—Relieving C.P.R. from providing further protection at highway crossing near Myrtle, Ont.
- 29,998. Aug. 17.—Dismissing Canadian National Rys. application for order that 50% of cost of subway at Pembina St., Winnipeg, be paid by Winnipeg Electric Ry. Co.
- 29,999. Aug. 13.—Ordering C.P.R. within 60 days to install improved type of automatic bell at highway crossing about one mile north of Guelph, Ont.
- 30,000. Aug. 16.—Amending order 29,239, Jan. 13, re Hillcrest Lumber Co.'s railway crossing of Esquivalent & Nanaimo Ry., Cowichan Subdivision, Vancouver, B.C.
- 30,001. Aug. 16.—Ordering C.P.R. to restore train service between Calgary and Macleod, Alta., which was discontinued in Jan., 1920; restoration to take place with the autumn change of timetable, and in any case, by Oct. 1, and rescinding order 29,627, May 11.
- 30,002. Aug. 16.—Approving agreement, July 29, between Bell Telephone Co. and Dover Tp., operating Dover Municipal Telephone System, Kent County, Ont.
- 30,003. Aug. 14.—Ordering Grand Trunk Pacific Ry. to provide farm crossing for John Weber, in north half of Sec. 7, Tp. 28, Range 17, west 2nd meridian, Sask.
- 30,004. Aug. 17.—Authorizing Toronto, Hamilton & Buffalo Ry. to build two spurs for Hoover Suction Sweeper Co. of Canada, Hamilton, Ont.
- 30,0005. Aug. 16.—Authorizing C.P.R. Co. to build spur for Beatty Bros., Fergus, Ont.
- 30,006. Aug. 14.—Authorizing Canadian National Rys. to build spur for Northern Groceries Ltd., Fort Frances, Ont.
- 30,007. Aug. 17.—Authorizing Niagara, St. Catharines & Toronto Ry. to build siding for Provincial Paper Mills Co., Thorold, Ont.
- 30,008. Aug. 16.—Approving plan of C.P.R. standard coaling plant of 50 tons capacity.
- 30,009. Aug. 16.—Approving plan, profile and book of reference showing revised location of Rosetown Southeastery Branch from Sec. 3, Tp. 27, Range 16, at mile 24.64, to Sec. 31, Tp. 23, Range 15, west 3rd meridian, at mile 44.37.
- 30,010. Aug. 16.—Approving cableway to be erected by Grand Trunk Pacific Branch Lines Co. for Blackstone Coal Co., over its Alberta Coal Branch at mile 53.6.
- 30,011. Aug. 17.—Approving proposed replacement by C.P.R. of deck lattice span by three reinforced concrete slabs on new piers at bridge 83.23, North Bay Subdivision, over Amable DuFond Creek, Ont.
- 30,012. Aug. 14.—Authorizing Essex Terminal Ry. to build spur for Dominion Forge & Stamping Co., Sandwich East Tp., Ont.
- 30,013. Aug. 17.—Approving C.P.R. revised plan showing proposed replacement of existing span by three reinforced concrete spans at bridge 98.76, over Kaibakong Creek, North Bay Subdivision, Ont.
- 30,014. Aug. 16.—Authorizing C.P.R. to build passing track at grade across highway on east boundary of station grounds at Rosser, Man.
- 30,015. Aug. 14.—Approving Michigan Central R.R. revised plan showing proposed change in interlocking plant at crossing of G.T.R. at Welland, Ont.
- 30,016. Aug. 16.—Authorizing C.P.R. Co. to build spur for Hunter & Co., at mile 18.76, North Bay Subdivision, Ont.
- 30,017. Aug. 19.—Ordering C.P.R. to complete station at Metiskow, Alta.
- 30,018. Aug. 17.—Authorizing Canadian Northern Pacific Ry. to divert portion of road through s.e.  $\frac{1}{4}$  Sec. 23, n.e.  $\frac{1}{4}$  Sec. 14, Tp. 14, and Lot 15, Osoyoos Division, Yale District, B.C., and for such purpose to occupy certain lands of Mrs. A. McKay.
- 30,019. Aug. 16.—Authorizing Canadian National Rys. to build crossing at Second St. west, Fonehill, Sask.
- 30,020. Aug. 16.—Authorizing C.P.R. to build spur for Canadian General Electric Co., Toronto.
- 30,021, 30,022. Aug. 18.—Dismissing application of Matlock Beach Club, in Manitoba, for order directing C.P.R. to grant campers there commutation privileges, and also, application of Winnipeg Beach Community Club, in Manitoba, against excessive increase in passenger fares between Winnipeg and Winnipeg Beach.
- 30,023. Aug. 17.—Declaring that Great Northern Ry. application (under sec. 345 of the Railway Act, 1919, for permission to issue annual pass in favor of C.T. Tawney, U.S. Veterinarian, is within the spirit and intent of general order 274, Nov. 20, 1919.
- 30,024. Aug. 16.—Approving location and details of C.P.R. station at Murray, Ont.
- 30,025. Aug. 20.—Authorizing G.T.R. to use bridge 221 over stream at mile 24.07, near St. Isidore Jct., Que.
- General order 302. July 23.—Amending general order 293, Apr. 26, re brakemen's seats on locomotives. This is given in full on another page.
- General order 303. Aug. 13.—Increasing proportions of through rates, fares and charges between U.S. and Canada, in both directions in effect at this date, accruing within Canada, to the extent that they shall conform to increases authorized by I.C.C. order, dated at Washington, D.C., July 29, except on coal and coke, increases on which are reserved pending Board's judgment in application of carriers for increased rates within Canada; said increases to become effective Aug. 26 on not less than five days notice. This order is given in full on another page.
- General order 304. Aug. 19.—Ordering that rates and charges on export freight traffic from Canadian shipping points to Montreal, Quebec, St. John, West St. John, and Halifax, be increased in conformity with order of Interstate Commerce Commission, to become effective on or after Aug. 26, on not less than 5 days notice. This order is given in full on another page.
- General order 305. Aug. 19.—Authorizing Canadian carriers of interstate traffic to publish and file tariffs in accordance with Special Permission 50,321 of Interstate Commerce Commission, to apply, at points in Canada, only on traffic en route from any U.S. point through Canada to any U.S. destination. This order is given in full on another page.

**Canadian National Rys., Directors' Inspection Trip.**—D. B. Hanna, President, Canadian National Rys., who returned to Toronto early in August, from a trip over the Canadian National and Grand Trunk Pacific Railways to the Pacific Coast, in company with the Minister of Railways and Canals, will leave Toronto again on Sept. 4, for an inspection trip over the C.N.R. via Port Arthur and Winnipeg, to Vancouver, and will possibly go thence to Prince Rupert and return east by the G.T.P.R. part of the way and then by the C.N.R. On the return trip he will go, via Montreal and Quebec, to St. John, Halifax, Sydney, and probably Prince Edward Island. He will be accompanied by a number of the directors, those likely to go being Major Graham A. Bell, C.M.G., Deputy Minister of Railways and Canals; A. P. Barnhill, K.C., St. John, N.B.; Thos. Cantley, New Glasgow, N.S.; Robt. Hobson, Hamilton, Ont.; and R. T. Riley, Winnipeg. The last mentioned will join the party at Winnipeg.

The Interstate Commerce Commission has announced that the larger of class 1, U.S. railways have reported a deficit of \$25,881,485 in railway operating for April. The government's guarantee to the railways for loss, to Sept. 1, amounts to approximately \$75,000,000,000 a month and the April deficit makes a loss to the government of more than \$100,000,000 for the month.

The Canadian Ticket Agents' Association will hold its annual meeting and outing at Montreal on Sept. 22 and 23.

## Increases Authorized in United States Freight and Passenger Rates.

The Interstate Commerce Commission gave judgment at Washington, D.C., July 29 on the application made in April and May by the official, southern and western classification territories for authority to increase rates, the original application asking for an increase of freight rates to a basis that will enable them to earn an aggregate annual net railway operating income equal, as nearly as may be, to 6% upon the aggregate value of the railway property of such carriers held for and used in transportation service. The judgment, which is a very voluminous one, deals with the groups into which the territory should be divided, viz., eastern, southern and western, and mountain-Pacific, efficiency in operation, property investment, the constructive year, revenue needs of carriers in the different groups and proceeds as follows:—In the original application the carriers proposed to obtain the desired additional revenue by general percentage increases in the respective groups, applicable to freight traffic only. No increases were suggested upon passenger, express, or mail traffic. In their amended proposals, following the wage award of the Labor Board, they propose to make increases upon all classes of traffic.

**Passenger Traffic.**—During the last nine years there has been a substantial increase in the number of revenue passenger miles. The increase for the country as a whole from 1911 to 1919 was over 40%.

Passenger fares were increased to a minimum rate of 3c. a mile on June 10, 1918, resulting in an increase of 50% where 2c. a mile was the basic fare, 20% where 2½c. applied, and no increase where the fare was 3c. or higher. It appears that rates per passenger mile have increased since 1916, as follows: In the eastern group, 27%; in the southern group, 27½%; and in the western group, 22½%. The relatively small increase in the western group is due to the fact that a 3c. basis prevailed more generally in that territory than in other parts of the country.

In part because of conditions growing out of the war the passenger traffic has become relatively more profitable during the last three years. A reduction in the number of passenger trains occurred simultaneously with a substantial increase in the number of passengers carried, resulting in heavier loading of passenger cars and trains. In 1919 the number of passenger miles was 30% greater than in 1916, but the number of passenger train miles was 12% less. Thus, in spite of the curtailment in service, the passenger revenue for the railways as a whole was greater by \$470,362,485 in 1919 than in 1916. This increase in revenue is regarded by the carriers as net, "almost more than net, because it was actually moved in fewer trains."

Following request of counsel for certain shippers, the carriers provided for the record an analysis of the freight and passenger earnings and expenses for certain designated railway companies for the calendar year 1919. In making this analysis, the expenses that could not be allocated to freight or passenger traffic were apportioned generally in accordance with instructions issued by us on Jan. 1, 1920. A recapitulation of the figures showing the ratio of freight and passen-

ger service expenses to freight and passenger revenues is as follows:

	Operating ratio, freight service.	Operating ratio, passenger service.
Atchison, Topeka & Santa Fe	74.53	67.84
Atlantic Coast Line	89.54	80.21
Baltimore & Ohio	97.88	75.96
Chicago & North Western	90.41	75.93
Chicago, Burlington & Quincy	85.8	67.98
Erie System	95.74	89.72
Great Northern System	80.70	84.08
Louisville & Nashville	95.3	76.9
New York Central	91.45	60.22
Cleveland, Cincinnati, Chicago & St. Louis	83.45	63.84
Pennsylvania Railroad, East	98.16	99.16
Michigan Central Railroad	81.20	58.50
Southern Railway	98.50	78.40

It will be noted that in the great majority of instances, the operating ratio was decidedly more favorable for the passenger traffic than for the freight traffic. However, there appears to be a wide discrepancy between the figures presented for the various lines, and too much reliance should not be placed upon this showing. Resumption of more frequent train service will tend to increase the operating ratio for passenger traffic. The carriers contend that it is uncertain whether an increase in the general level of passenger fares will yield increased revenue proportionate to the increase in the fare level, because of possible reduction in travel following a material increase in fare. The foregoing would seem to indicate that such increase as is approved upon passenger traffic may properly be less than the percentage increase applied to freight traffic.

There has also been suggested the desirability of obtaining additional revenue for the rail carriers from an extra charge placed upon passengers in sleeping and parlor cars. Such a charge amounting to ½c. a mile was in effect for a brief period during federal control. A charge of this character has much in its favor. Unquestionably the service is more valuable to the passengers, and more expensive to the rail carriers. The Pullman Co. opposes the re-establishment of a surcharge for Pullman occupancy, on the ground that such a charge reduces the travel in cars of that type. It submitted a statement showing the revenues by weeks from Mar. 1 to Sept. 30, 1918, compared with corresponding weeks of the previous year. The surcharge imposed by the Director General was in effect from June 10 to Nov. 30, 1918. The statement submitted by the Pullman Co. shows that beginning with the third weeks of June there was a reduction in the revenue, as compared with the same weeks of the previous year, whereas, during the period from Mar. 1 to June 15, the earnings in 1918 were greater than in 1917. These figures appear in part at least to sustain the contention that the surcharge operated to reduce revenues. An analysis of the situation, however, indicates that factors other than the surcharge were in part responsible for the decreased revenue from passengers in sleeping and parlor cars in 1918, as the very large reduction in service rendered during that year undoubtedly accounts for a portion of the reduction in revenue. It is well known that the policy of the U.S. Railroad Administration at that time was to discourage luxury travel and reduce the mileage of sleeping and parlor cars, particularly the latter. Figures quote above in this report indicate that the total number of passenger miles in 1918, notwithstanding that the surcharge was in

effect for half the year, increased 8% over the previous year and were greater than in any year prior thereto, which indicates that travel on the whole was not materially affected by the surcharge. In the amended application of the carriers following the wages award, it is proposed that a surcharge on passengers in sleeping and parlor cars be established amounting to 50% of the charge for space occupied in either class of equipment. The carriers estimate that a charge of this amount will produce in the eastern, southern and western groups a total of \$43,639,344.

We conclude that increases as indicated next below may be made by all steam railways subject to our jurisdiction serving the territory embraced in the groups hereinbefore designated.

1. All passenger fares and charges may be increased 20%. The term "passenger fares" may be considered to include standard local or interline fares; excursion, convention, and other fares for special occasions; commutation and other multiple forms of tickets; extra fares on limited trains; club car charges.

2. Excess baggage rates may be increased 20%, provided that where stated as a percentage of or dependent upon passenger fares the increase in the latter will automatically effect the increase in the excess-baggage charges.

3. A surcharge upon passengers in sleeping and parlor cars may be made amounting to 50% of the charge for space in such cars, such charge to be collected in connection with the charge for space, and to accrue to the carriers.

4. Milk and cream are usually carried in passenger trains, and the revenue therefrom is not included in freight revenue. Rates on these commodities may be increased 20%.

**Switching and Special Services.**—The carriers' original petitions asked for percentage increases in freight revenue only. In their reports to us, revenue from switching and certain other special services is stated separately from freight revenue, and therefore, accepted literally, the proposal would result in no increase on switching service. However, it is conceded that the submission of the proposal in this form was due to a misunderstanding, and it is now proposed to apply increases to switching and other special services as well as to freight rates proper. No substantial reasons have been developed for exempting charges for switching from the general increases. It is our opinion that the charges for this service should be increased, together with the charges for transit, weighing, diversion, reassignment, lighterage, floatage, storage (not including track storage), and transfer, where the carriers provide separate charges against shippers for such services. The charges for other special services are not to be subject to the general increases herein authorized. The percentage to apply should be determined by the percentage applicable in the group where the service is performed, except that at points on the boundary line between two groups taking different percentages the higher percentage should apply. It should be understood that where tariffs now provide for the absorption by one carrier of the charges of another carrier in specific amounts such absorptions should be revised in harmony with the increase in charges herein authorized.

### Freight Rate Increases.

In their original applications the carriers proposed general percentage increases in freight rates in the respective groups as follows: eastern, 30%; southern, 31%; western, 24%. Following such general percentage increases, they indicate their willingness, where necessary, to revise rates to restore in so far as is deemed practicable existing recognized relationships and differentials, and as to coal and grain in certain important situations such readjustments are proposed in this proceeding. It is stated that the percentage method is not only on the whole the fairest to all interests by distributing the burden in proportion to the haul, but that it is the only way in which the desired increased revenue may be obtained without complications and delays due to tariff difficulties and to the lack of accurate statistics from which to determine the amount of revenue which may reasonably be expected from flat or maximum increases on particular commodities. It would be desirable, if it were possible, to determine definitely the commodities, the sections of the country, and even the individual rates which can best bear the burden of increases, and the relationships of the rates and differentials which will be disturbed by a percentage increase. This is precluded by the necessity of prompt action upon the main issues presented.

**Percentage Increases Versus Flat Increases and Maintenance of Differentials and Relationships.**—Many shippers have directed their testimony and argument principally to the method of increasing the rates rather than to the amount of the increases. Shippers are far from unanimous in their views and may be divided into three groups, viz., those who seek the preservation of existing relationships and differentials either by specific or flat increases or by applying the percentage increase to base rates and employing in connection therewith differentials from and to other points; those who advocate a percentage increase in instances, contending that differentials should increase in the same ratio as all other rates and charges; and those who advocate a percentage increase with a maximum. While established or differential relationships of rates are not general, there are many such adjustments; some fixed by the carriers and others by us, and it is contended by some shippers that in such cases it is desirable in readjusting the rates to maintain the differentials. Many relationships in cents per unit were disturbed by the increases made by the Director General, except upon a few commodities of heavy movement which were subject to specific increases in cents or dollars and cents per unit. A relatively small proportion of these relationships have subsequently been restored. It is evident that there are many competitive situations where no recognized differentials have ever existed but where, nevertheless, the rates have been made to reflect competitive conditions. Such situations greatly outnumber those where "fixed relationships" have been established.

It is generally understood that on traffic to and from western trunk line territory and the southwest Chicago enjoyed for years a differential of 20c., first class, over St. Louis. This was thought to be a fixed, long-standing difference, and well entitled to bear the title differential. Under general order 28 it was increased to 25c. We are now asked on behalf of certain Chicago interests not

to increase this differential. In this connection it is interesting to note that on traffic to and from the east the St. Louis rates are made uniformly 117% of the Chicago rates, so that under any general increase in rates the spread between the St. Louis rates and the Chicago rates is automatically widened. In 1914 the first-rate from New York to St. Louis was 13c. higher than to Chicago. The difference is now 19c., although the percentage relationship is the same now as it was in 1914. There is apparently no more justification for maintaining Chicago's differential over St. Louis on traffic to the west than for maintaining the differential of St. Louis over Chicago on traffic from the east. Practically all rates in official classification territory are constructed upon a percentage basis, and attention is directed to the important fact that not a single interest has here maintained, with the possible exception of Chicago, that we should depart generally from the percentage basis which has so long prevailed.

In favor of maintaining differentials, it is said that they have been fixed in most cases after careful investigation, and that they represent the proper measure of differences in the rates; that often they represent the maximum differences which will permit more distant shippers to compete with those in close proximity; that to increase rates by a percentage tends to decrease the radius in which goods are marketed, and thus by lessening competition prices are advanced; and that in all cases the margin of profit has not increased proportionately to prices. Those who oppose maintaining differentials at this time contend that the value of the dollar expressed in terms of commodities shipped today is in reality but one-half its former value, and, therefore, a differential which was fixed at a given amount several years ago should, to have the same economic effect, be greater today; that there have been general increases in the prices of practically all commodities, in wages, and in the charges for nearly all services, and that differentials should not be made an exception to the rule; and that as increased operating costs are the underlying reason for the proposed increased rates, the additional service represented by the differential, being more expensive than heretofore, should pay greater rates as well as other services. The adoption of specific increases in cents per unit instead of percentage advances will, of course, maintain existing relationships. However, the carriers almost uniformly oppose this method and it is not generally advocated by shippers. Further, the difficulty of its adoption is apparent because of the lack of reliable statistics from which to determine the probable additional revenue from a given increase. It should also be noted that everyone who advocated this method insisted that flat increases be applied but once to combination rates. The complicated nature of tariff publication to make such an arrangement effective, when different percentages of increase are being made in different groups, is apparent.

Without attempting to pass finally upon the question whether in given cases differentials should or should not be maintained, it is evident that no general programme of maintaining differentials can be made effective coincident with the increases here approved without materially delaying their effective date as definite testimony covering individual situations is before us in only a

very few cases. To maintain differentials by applying the percentage increases to basing rates and adding thereto existing differentials cannot be done without materially lessening the amount of additional revenue to be derived by the carriers, as generally differentials are added to rather than deducted from base rates. After carefully considering the situation we find that with the exceptions hereinafter noted general percentage increases made to fit the needs of the groups of lines serving each of the four groups must be considered for present purposes the most practicable. This conclusion is without prejudice to any subsequent finding in individual situations.

**Provisions for Improvements, Betterments, or Equipment.**—Section 15a of the Interstate Commerce Act provides that during the two years beginning Mar. 1, 1920, the Commission shall take as such fair return a sum equal to 5½% of such aggregate value, but may, in its discretion, add thereto a sum not exceeding one-half of one per centum of such aggregate value to make provision in whole or in part for improvements, betterments or equipment, which, according to the accounting system prescribed by the Commission, are chargeable to capital account. The increases here authorized are intended to yield the additional ½ of 1%. The record leaves no doubt as to the needs of the country for additional transportation facilities. All carriers participating in the increases will be expected to make appropriate provision for additional improvements, betterments, or equipment of a character chargeable to capital account and to make report to us semi-annually, as of Dec. 31 and June 30, showing what portion of the increased revenue resulting from the increases here authorized has been devoted to that purpose.

### Conclusion as to General Increases.

We are of opinion and find that the following percentage increases in the charges for freight service, including switching and special services, together with the other increases hereinbefore approved, would under present conditions result in rates not unreasonable in the aggregate under sec. 1 of the act and would enable the carriers in the respective groups, under honest, efficient, and economical management, and reasonable expenditures for maintenance of way, structures, and equipment, to earn an aggregate annual railway operating income equal, as nearly as may be, to a return of 5½% upon the aggregate value, for the purposes of this proceeding, of the railway property of such carriers held for and used in the service of transportation and ½ of 1% in addition; eastern group, 40%; southern group, 35%; 2 western group, 35%; mountain-Pacific group, 25%.

In view of the different percentages of increase herein approved, it becomes necessary to make provision for rates between the various groups. Where rates are constructed by the use of combinations upon gateways between any two groups, the through rates should be increased by applying to each factor its respective percentage. Rates between points within a group and points on the border line of such group should be increased according to the percentage applicable to the group. Where a river constitutes a boundary line between two groups, points on both banks thereof shall be considered as border line points. Joint or single line through rates between points in one group and points in other groups should be increased

33 1/3%. In cases where the rates over different routes between the same points would, by a strict application of the varying percentages of increase herein approved, be subject to different percentages, the lowest percentage applicable to any of the routes may be applied to the rates over all of such routes. In the construction of rates in accordance with these findings it is not intended that the group boundaries hereinbefore designated should be strictly observed, but the territorial boundaries heretofore recognized should be observed. For example, Richmond, one of the so called Virginia cities, should continue on the basis which it has heretofore enjoyed.

The above findings apply to all steam railways subject to our jurisdiction, including so called "short lines," but not to railways in Alaska. While the New England carriers are included in the eastern group and are subject to the percentage for that group, the evidence as to the disproportionate needs of the New England lines makes it desirable that the carriers give careful consideration to the divisions of joint rates accruing to these lines.

**Individual Commodities.**—Considerable evidence was presented with respect to the rates upon a number of individual commodities, including coal, lumber, cement, fruits and vegetables, petroleum, brick, sand, gravel and rock, asphalt, slag, grain, live stock, packing house products, ore, bullion, potash, salt, fertilizers, and terra cotta. Various issues have been raised or are presented as to these commodities, the principal of which are as follows: Whether there should be departures from the general percentage increases by maintaining differentials or by the application of specific increases instead of percentages; whether maximum increases should be provided in order to avoid the full percentage increase upon relatively high rates from distant points of production to important markets; whether because of the high cost of production and marketing of some commodities, the percentage increases proposed by carriers will result in a cost delivered at points of market or consumption so great as to curtail production and distribution, an undesirable situation at this time of world shortage of commodities; whether a more general necessary use warrants a lower transportation charge; whether the rates effective June 24, 1918, before general order 28 became effective, should be made the basis of readjustment now by applying thereto a 25% increase and superimposing thereon the percentage increases now found reasonable. Our general conclusions as to the impracticability of specific increases or of attempting now to maintain differentials dispose of a number of these contentions. It should also be said that while we do not here sanction specific increases in lieu of percentages, we are not to be understood as expressing disapproval of increases of that character made by the Director General. Such increases were made under war conditions and under circumstances that do not now exist.

Our attention was called at the hearing to a number of formal complaints now pending, and we are asked to except from the general increase the rates in issue in those complaints. This would have the effect, during the pendency of those proceedings, of giving the rates in question a preferred standing and of exempting them from the general increase. In our opinion, a fairer disposition will be attained by applying the general in-

crease to these rates, with the understanding that this action is without prejudice to any future findings.

**Coal.**—Carriers serving the Pennsylvania-Ohio-West Virginia coal fields propose to continue the existing differentials in coal rates, and have worked out a scheme of rates to effect that result. Carriers in the southern and western groups propose to ignore existing differentials in coal rates within those groups. The proposal of the eastern lines to preserve existing relationships is approved, and carriers in the other groups should work out a similar plan for restoring the relative adjustments of coal rates now obtaining in those groups. An effort should be made promptly to devise rates in each group that will yield, as nearly as practicable, the same revenue in the aggregate as would be afforded by a straight percentage increase on the bases herein approved.

Lumber moves in large volume, and it is under ordinary conditions a commodity of comparatively low value and highly competitive in nature. It is produced in almost all parts of the country. The greatest consuming region is in the middle west and the states east of the Mississippi River and north of the Ohio, including New England. Lumber from both the west and the south is marketed in large volume in this region, and the competition between the two producing sections is keen. There is no definite or fixed relationship in the rates from the south and the west to the consuming territory described, but carriers from each of these sections have endeavored to maintain rates relatively so adjusted as to permit free movement from each. The volume of production in the west has grown materially in the past decade, until today it is such that if excluded from eastern markets it is claimed a considerable curtailment of production will result. The Director General applied a maximum increase of 5c. upon lumber, which had the effect of maintaining in most cases the existing spread in cents per 100 lb. between southern and western lumber in the northern and eastern markets. The western lumber producers urge in this proceeding also the adoption of a maximum. Most of the southern producers, including those in the Carolinas and others who ship on comparatively short hauls to the northern markets, urge the application of a straight percentage increase. For the purpose of this report it is our opinion that the percentages hereinbefore approved should apply to this commodity.

**Petroleum and its products.**—The principal sources of the petroleum marketed in the U.S. are in the southwest, which will be termed the midcontinent field; in Wyoming, in California, and in Mexico. In the past 10 years many refineries representing a considerable investment have been established in the midcontinent field and the refined oil there produced is marketed to a considerable extent in the middle west and in the states east of the Mississippi and north of the Ohio. In competition with the refineries of the midcontinent field in the northern and eastern markets are the refineries of Mexican petroleum located along the Atlantic coast and other refineries in the northern and eastern states, which obtain their crude oil in large part from the midcontinent and other fields through pipe lines, though some of these refineries use rail transportation for the movement of crude oil. The Director General imposed on petroleum a flat increase of 4 1/2% per 100 lb. in lieu of the

standard 25%. The midcontinent shippers claim that a percentage increase now applied without modification to petroleum will in all probability tend to restrict the long haul movement by rail. Other shippers contend that the percentage increase should be applied without exception. It is concluded that no exception to the general percentage increases herein approved need at this time be made upon petroleum or its products. As has been observed in connection with other situations, the carriers should give careful consideration to the effect of the percentage increases approved on petroleum and, if necessity arises, should arrange for such modifications as the situation may seem to warrant.

Fruits and vegetables are produced in large volume in the far western states and in the south, particularly in Florida. These products are shipped in season to practically all sections of the country, but the most important consuming territory lies east of the Mississippi River and north of the Ohio. Comparatively long hauls to the latter territory are involved both from the south and from the Pacific coast states, and it has been contended that the effect of the proposed percentage increases applied to these rates will produce charges so high as to restrict consumption because of the resultant high delivered cost. It has been shown that in some instances it has not been possible to market profitably some fruits and vegetables, but the facts before us in this proceeding do not warrant the conclusion that transportation charges are the controlling factor in producing this result, or that the percentage increases applied to the present rates will in fact have the effect feared by the fruit and vegetable shippers. The western apple producers claim that in the past they have had difficulty in marketing in the east and that percentage increases will add materially to this difficulty. It appears, however, that the size, varying widely from year to year, of the eastern and western crops, respectively, is an important factor in determining the prices received by western growers and the ability to market in the east. A number of the fruit and vegetable rates covering long hauls, upon which there is a heavy movement, are now before us in other proceedings, and our prior observations as to the effect of our present findings with respect to rates so pending upon complaint are applicable. It is concluded that no exceptions to the general percentage increases will now be made.

**Sand, Gravel, Rock, and Slag.**—The Director General increased rates on sand, gravel, and stone by specific amounts. Rates on slag in the east were increased 25% and in the south generally by 1c. per 100 lb., the same as applied to sand and gravel. Shippers of all of these commodities contend that the 1c. increase made by the Director General averaged much more than 25% and that to apply to the present rates the percentage increases proposed by the carriers will produce rates so high as to materially restrict movement. The eastern carriers concede that rates on slag should not be less than upon sand and gravel. We are not convinced that exceptions should be made at this time from the percentages approved for traffic generally. However, the record does suggest that rates in eastern territory are out of proportion to those in the other groups. The carriers have indicated a willingness promptly to readjust rates in cases where

hardship results from the general percentage increases, and their special attention is called to these commodities to the end that such action may be taken as the facts may seem to warrant.

**Live Stock and Packing House Products.**—Shippers contend that the condition of the live stock industry is such as to make it probable that the full percentage increase proposed by the carriers will discourage production and distribution. Live stock is produced throughout the country, but the consuming markets in the north and east are to a considerable extent dependent upon the stock produced in the west and southwest. Drought conditions have prevailed here and there in recent years and the present condition of the producers does not appear favorable. However, it is not clear that this condition results from transportation charges. The Director General in increasing rates on live stock applied a maximum of 7c. per 100 lb., while the full 25% increase was applied to packing house products. To apply again a maximum to live stock, as requested by shippers, without similar maximum upon packing house products, will in all probability tend to lessen the movement of the southwestern and western stock to local packing plants and increase the movement to the larger and more distant plants in the middle west. One of the principal difficulties of which complaint has been made by the live stock producers is the lack of prompt and efficient service. To encourage the long haul movement as against the short haul movement under present conditions of car supply would tend to increase rather than reduce the transportation difficulties. From Montana to Chicago the rate is 55c. and on hogs 62c. per 100 lb. These are among the highest rates now in effect applicable to heavy movements. Under the general basis of increase herein approved, these rates would be advanced 18c. and 21c., respectively, approximately 1/5c. per lb. It is concluded that the facts before us at this time do not warrant any exception to the percentage method of increasing the rates on either live stock or packing house products.

**Iron ore.**—A considerable proportion of the iron ore consumed in the U.S. originates on ranges in Minnesota and Michigan near the head of Lake Superior. This ore moves to furnaces on Lake Michigan and Lake Superior; to furnaces on Lake Erie and in Pennsylvania, Ohio, and other states. The movement is by rail to the upper lake ports, and when destined beyond, by lake vessels to the lower lake ports. Because of the keenly competitive situation between the respective furnaces, the Director General adopted a specific increase of 30c. a ton upon iron ore in lieu of a percentage, which was applied to the movement from the Michigan and Minnesota ranges to the upper lake ports, but not from lower lake ports to eastern destinations, thus resulting in an equal increase in cents per ton for the rail transportation to each of the competing furnaces. Under this plan the rates of the western carriers up to the lake ports were increased approximately 57%, whereas the rates of the eastern carriers from the lower lake ports were not increased. In this proceeding the eastern carriers propose first to apply an increase of 22c. a ton and then impose thereon the general percentage increase. The testimony of ore shippers is conflicting, some proposing no further increases from the ranges to the lake ports, some favoring double in-

crease in the rates from the lower lake ports, others proposing no exceptions to the general percentage increases proposed on traffic generally. The returns made by the principal ore carrying roads from the Minnesota ranges to Lake Superior ports indicate that such lines are in a much more prosperous condition than the western carriers generally. It is concluded that at this time no increases should be made in the rates on iron ore from the Minnesota or Michigan ranges to Lake Superior or upper Lake Michigan ports. Other rates on iron ore may be increased according to the percentages herein approved.

**Other Ores.**—In some of the western states there is a considerable movement of low grade ores, some of which are valued at \$5 a ton or less. Shippers of these low grade ores contend that further increases in the rates thereon will result in curtailing or destroying their movement. The evidence before us in this proceedings, however does not warrant exceptions to the general percentage increases at this time.

On grain and grain products we are asked to apply in connection with such percentages as may be approved, a maximum increase. For the same reasons that have led to the conclusion that neither specific nor maximum increases are desirable, we find that upon this record no exception should be made of the general percentages upon these commodities, except as noted. There are in the middle west a number of important grain markets through which it has been customary to maintain an equalization of the rates from important producing states to important consuming regions, under which the sum of the rates into and out of the various markets is in most cases equal. This adjustment differs from an ordinary differential basis in that it is in substance providing an equal through charge over various routes between the same points by the use of sums of proportional rates rather than the establishment of joint through rates or of transit. The application of different percentages in the various groups will result in dislocation of this equalization. Carriers and shippers unite in recommending that this equalization be continued, because of the keenly competitive situation of the various markets and of the lines of railway serving such markets. However, sufficient detailed information to cover fully the situation is not before us upon this record. We find that the grain rates into and out of these markets may be increased by the general percentages herein approved, with the understanding that the carriers will, within thirty days after the service of this report, file tariffs restoring the equalization through the grain markets now enjoying that basis. This should be done after conference with interested shippers, and, if desired, we will lend our co-operation in the premises.

**Port Differentials.**—The eastern carriers express of record their willingness to preserve existing relationships between the rates to and from the eastern ports. No objection to this proposal was made. This result can be readily accomplished for the reason that all rates in official classification territory between the ports and points west of the Buffalo-Pittsburg line are based on the New York-Chicago rates. The base rates may be increased and existing port differentials maintained. It is our view that in filing the increased rates here authorized a provision of this character should be made.

**Applications of Boat Lines.**—There have been filed in this proceeding applications for increased rates by a number of boat lines. The record shows that the expenses of the boat lines have increased in general at least in the same proportion as expenses of the railways. Authority is therefore granted to boat lines subject to our jurisdiction to increase their rates to the same extent as increases are herein granted to railroads operating between the same points or in the same territory. In the construction of rail and lake rates, the present parity between Chicago and Duluth should be maintained.

**Freight Rates of Electric Lines.**—Petitions have been filed in this proceeding by a national organization of electric lines, seeking permission to increase their rates in the same proportion as the rates of trunk lines are advanced. The operating costs of these lines have, on the whole, increased in approximately the same ratio as those of steam railways. In some instances there is competition between the electric lines and the steam railways. We conclude that the freight rates of electric lines may be increased by the same percentages as are approved herein for trunk lines in the same territory. This is not to be construed as an expression of disapproval of increases, made or proposed in the regular manner, in the passenger fares of electric lines.

**Minimum Carload Charge, Minimum Class Scale, and Minimum Charge per Shipment.**—There is now in effect, with certain important exceptions, a minimum charge of \$15 a car on carload traffic, applicable to line haul movements. There are also minimum class rates in the three classification territories. We find on the record no explanation of the underlying basis of the minimum carload charge or the minimum class scales and no justification for increasing them. It is our understanding that these minima were imposed as a revenue measure in connection with rates substantially lower than those authorized in this report. We also find that the minimum charge per shipment for less than carload traffic should not be increased.

**Specific Divisions.**—In many cases divisions between carriers are in the form of specific amounts per unit. It is obvious that unless divisions of this character be increased, such lines will receive no benefit from the increases herein approved, while the other carriers will receive more than the respective percentage increases applicable to the traffic. It is concluded that where carriers earn specific amounts as their compensation out of through rates or fares, such amounts should be increased in the same percentages as the through rates or fares. Where the divisions of carriers participating in through rates or fares are in fixed amounts per unit and are absorbed by other carriers, such absorptions should be increased in the same percentage as the through rates or fares.

**Joint Rates to and from Foreign Countries.**—Nothing herein should be construed as authorizing any increases in the proportions of joint through rates to or from points in foreign countries accruing in such foreign countries. The proportions of such rates accruing within the U.S. may, however, be increased to the extent herein approved for domestic rates in the same territory.

**Fourth Section Departures.**—In instances where the approval herein of different percentages of increase results in departures from the provision of sec.

4 of the act, the carriers will be expected either to correct such departures by tariffs filed not later than Nov. 1, 1920, or to file on or before that date applications seeking permission to continue such departures. Temporary 4th section relief will be granted by appropriate order.

**Disposition of Fractions.**—In computing and applying all increased rates authorized herein fractions will be treated as follows: Where rates are stated in amounts per 100 lb. or any other unit, except as provided in the succeeding paragraph, fractions of less than  $\frac{1}{4}$ c. will be omitted. Fractions of  $\frac{1}{4}$ c. or greater but less than  $\frac{3}{4}$ c. will be stated as  $\frac{1}{2}$ c. Fractions of  $\frac{3}{4}$ c. or greater will be increased to the next whole cent. This rule will also be followed in computing passenger fares. Where rates are stated in dollars per carload, including articles moving on their own wheels, when not stated in amounts per 100 lb. or per ton, amounts of less than 25c. will be dropped; thus, \$25.24 will be stated as \$25. Amounts of 25c. or more but less than 75c. will be stated as 50c.; thus, \$25.65 will be stated as \$25.50. Amounts of 75c. or more, but less than \$1, will be raised to the next dollar.

**Outstanding Orders.**—An order will be entered modifying outstanding orders of the Commission to the extent necessary to permit the carriers to make effective the increases herein authorized.

**Effective Date of New Rates and Subsequent Adjustments.**—In view of the existing situation it is important that the increased rates be made effective at as early a date as practicable. The increases herein approved may be made effective upon not less than five days notice to the Commission and to the general public by filing and posting in the manner prescribed in the Interstate Commerce Act. The authority herein granted will not apply to any rates, fares, or charges filed with this Commission to become effective later than Jan. 1, 1921.

Most of the factors with which we are dealing are constantly changing. It is impossible to forecast with any degree of certainty what the volume of traffic will be. The general price level is changing from month to month and from day to day. It is impracticable at this time to adjust all of the rates on individual commodities. The rates to be established on the basis hereinbefore approved must necessarily be subject to such readjustments as the facts may warrant. It is conceded by the carriers that readjustments will be necessary. It is expected that shippers will take these matters up in the first instance with the carriers, and the latter will be expected to deal promptly and effectively therewith, to the end that necessary readjustments may be made in as many instances as practicable without appeal to us.

An order putting the judgment into effect was passed on the same date and a supplemental report was made Aug. 11, indicating specifically the percentages of increase that should apply to freight rates within Illinois territory; between points in Illinois territory and points in the eastern group; and between points in Illinois territory and points in the western group. The new rates went into effect Aug. 26.

The following change was made in regard to passenger fares:—In our original report we said, in effect, that in computing passenger fares the carriers should follow the same rule for the disposition of fractions as was approved

for the publication of freight rates where stated in amounts per 100 lb. or any other unit, except as otherwise specifically provided. Our attention is now called to the fact that it has long been the custom of the carriers in constructing passenger fares to round out fractions to the next full cent. It is our view that the practice heretofore observed may be applied in constructing the increased passenger fares, the surcharges for occupants of sleeping and parlor cars, and baggage charges, authorized in our original report.

### Cost of Railway Stationery.

An Erie Rd. official has compiled figures showing the company's expenditure for stationery and for steel rails from 1915 to 1919, inclusive, as follows:—

Year.	Stationery.	Rails	Rail price per ton
1915	\$403,125.20	\$660,386.00	\$30.00
1916	395,980.10	872,410.00	31.50
1917	560,565.83	658,839.00	31.50
1918	497,933.36	889,292.00	40.80
1919	541,474.55	781,143.00	40.80

Commenting on this, he says:—"It will surprise many employees to know, as these figures demonstrate, that stationery calls for such enormous outlay; and it will help to justify the efforts we have been making to convince employees who use paper and other articles included under the heading of stationery, that the subject is deserving of all the attention it is receiving."

### Regulations Respecting Great Northern Railway Locomotives in British Columbia.

The Board of Railway Commissioners passed order 29,914, July 19, as follows: Re fire protective appliances on Great Northern Ry. locomotives: Upon reading the reports and recommendations of the Board's Chief Operating Officer, and Chief Fire Inspector, it is ordered as follows:—

1. That the Great Northern Ry. file with the Board, on or before Aug. 1, 1920, and on or before April 1 of each succeeding year, until otherwise ordered, a list showing the locomotives, designated by number, assigned to service on its railway between Michel, B.C., and the International Boundary, near Gateway, Montana, and between Nelson, B.C., and the International Boundary, during the intervening part of the year before Nov. 1.

2. That, should it be necessary for the railway company, at any time during the said period, to substitute, or to make an emergency assignment to the lines in question, of any locomotive not so listed with the Board, the company shall immediately give advance notice of such intention, in the form of a telegram addressed to the Board at Ottawa and to the Board's district fire inspectors at Cranbrook and Nelson, B.C.

3. That in the cab of every locomotive actually operated over any portion of the said railway between Michel and the International Boundary, there shall, during the period between April 1 and Nov. 1, be posted a certificate, signed by a responsible official of the company, to the effect that the fire protective appliances on such locomotive have, within a period of not to exceed one week, been thoroughly examined, all defects repaired, and that such fire protective appliances, at the time of the issue of the certificate, are in good order, in full compliance with the requirements of the

Board pertaining thereto, such certificate to show the date of such inspection and the character of defects found and repaired, and to be available for inspection by any authorized officer of the Board. A copy of each such certificate shall also be forwarded promptly to the Board's Chief Operating Officer at Ottawa.

### Freight and Passenger Traffic Notes.

The Canadian National Rys. put in operation on Aug. 5, from Toronto, and on Aug. 9, from Winnipeg, compartment-observation-library cars on trains 3 and 4 between Toronto and Winnipeg. These cars are of steel construction throughout.

The Board of Railway Commissioners has ordered the C.P.R. to restore the train service between Calgary and Macleod, Alta., which was discontinued in January, such restoration to take place with the autumn change of timetables, and in any case not later than Oct. 1.

The Board of Railway Commissioners passed order 29,911, July 23, as follows: Upon its appearing that the C.P.R. Co. reduced its daily passenger train service between Nelson and Slocan, B.C., to a tri-weekly service without notice, as required by the Board's circular 139, of Jan. 13, 1915, and upon reading the protests filed against the change made in such service, it is ordered that the C.P.R. be directed forthwith to restore the daily service formerly in existence between Nelson and Slocan, pending compliance by the company with the requirements as to notice of the said circular 139, and such action by the Board, if any, as it shall deem necessary in the premises.

The Carquet & Gulf Shore Ry., acquired as from June 1 by the Dominion Government, has been incorporated in the Canadian National Rys. (Levis and east) as Carquet Subdivision. A mixed train leave Bathurst main line station at 8.40 a.m., arriving Tracadie, N.B., at 6.20 p.m., and a mixed train leaves Tracadie at 7 a.m. and reaches Bathurst main line station at 4.20 p.m. Both trains run in and out of Shippegan, but do not run into or out of East Bathurst.

The C.P.R. Tourist Department's statistics show that in 1919 the foreign tourist travel in Canada was 85% more than in 1919, and that up to midsummer this year last year's record had been passed, so that this season will be by far the best on record.

### Inverness Railway & Coal Co.'s Property Sold.

The Inverness Ry. & Collieries Ltd. is the title of a new company which is reported to have bought the Inverness Ry. & Coal Co.'s assets, the title passing to the new company by an order of a Nova Scotia court on July 31. The purchase is said to include the developed coal mines, the mining areas, the railway, and the shipping wharf. The railway extends from Inverness Jct., about a mile from Point Tupper, N.S., on the Intercolonial Ry. section of the Canadian National Rys., and runs northeasterly on Cape Breton Island to Inverness, 62 miles. The company's properties have been operated by a receiver for the bondholders, under an agreement, for some time. During 1919 the purchase of the line by the Dominion Government was urged, and although there were negotiations, nothing definite was arrived at.

## Canadian Pacific Railway Construction, Betterments, Etc.

**St. John, N.B., Bridge.**—The bridge over the St. John River, at the reversible falls, St. John, N.B., is to be replaced by a new structure a few feet further up stream and work has been started on the foundations for the abutments and on the rock excavation for the approach from the St. John end. We were advised Aug. 24 that the plans were being prepared for submission to the Board of Railway Commissioners at an early date. There have been some negotiations between the company and the city in regard to the bridge, and the city is reported to have decided to ask the Board to require that the new bridge be 90 ft. above high water, which is the same as the highway bridge, a little farther down the stream. The present railway bridge is 84 ft. above high water.

**McAdam Jct.**—A press report states that a contract has been let to J. A. Grant & Co., for the erection of three frame construction double houses at McAdam, N.B., for employes. The company is also reported to have let contracts for the erection of an addition to the car repair shops, and a brick addition to the machine shop at McAdam.

**Block Signals in Maine.**—A press report of Aug. 16 states that an order had been given for the installation of block signals on 25 miles of the company's lines in Maine, and that A. Price, General Manager, Eastern Lines, Montreal, and J. W. Woodman, General Superintendent, New Brunswick District, had gone to Augusta, Me., to confer with the Public Utilities Commission with respect to the matter.

**Palais Station, Quebec.**—A press report states that extensions to 2 umbrella train shelters at the Palais Station, Quebec, are under construction. The original shelters were each 250 ft. long, and the additions will make them each 403 ft. long.

**Chateau Frontenac Extension.**—Excavation work for the addition to the Chateau Frontenac, Quebec, is, a press report states, being proceeded with rapidly, and it was expected that work on the foundations would be started by the end of August.

**Timiskaming-Kipawa Line.**—We are officially advised that negotiations have been in progress for some time between the Quebec Government and the C.P.R. Co. with reference to the construction of a railway from Timiskaming to Kipawa, Que., under the Subsidy Act passed by the Legislature last session, but the agreement has not been signed at the date of our advice.

**Islington Station.**—The Board of Railway Commissioners has extended for three months the time within which the company shall erect a station at Islington, Ont.

**Walkerton Subdivision.**—The Board of Railway Commissioners has authorized the rebuilding of bridge at mile 27.7, Walkerton Subdivision, Ont.

**Algoma District.**—The Board of Railway Commissioners has authorized the rebuilding of bridges 28.89, North Bay Subdivision, and 41.85, Heron Bay Subdivision, Ont.

**Winnipeg Subways.**—A recent press report states that a meeting has been called in Winnipeg to ascertain the public feeling regarding a suggestion that a proposed subway under the C.P.R. tracks be at Sherbrooke St., and not at Salter St.

**Manitoba District.**—The Board of Railway Commissioners has authorized the rebuilding of bridge 3.1 over the Assiniboine River, at St. Thomas, Man.

**Donan, Man., Interlocking Plant.**—A press report states that the company has ordered a 28 lever Saxby & Farmer interlocking machine, with working levers and 4 spare spaces, for installation at Donan, Man. The machine will be installed by the company's signal construction forces.

**Govanlock Subdivision.**—The Board of Railway Commissioners has authorized the rebuilding of bridge 276, Govanlock Subdivision, Sask.

**Rosetown Southeasterly Branch.**—The Board of Railway Commissioners has approved plan, profile and book of reference of the portion of this branch from mile 20, in Sec. 27, Tp. 27, Range 16, west 3rd Meridian, to mile 24.64 in Sec. 3, Tp. 27, Range 16, west 3rd Meridian; the revised location of the branch from mile 55.41 to 60.22, and has authorized the construction of the line at grade across four highways.

**Saskatchewan Locomotive Houses.**—A press report states that tenders were received to Aug. 18 for heating the locomotive house extensions at Regina, Weyburn and Moose Jaw, Sask.

**Moose Jaw Southwesterly Branch.**—The Board of Railway Commissioners has approved plan, profile and book of reference for revised location of extension of the Moose Jaw Southwesterly Branch, Assiniboia to Consul, Sask., from mile 0, in Sec. 4, Tp. 4, Range 27; to mile 32.3, in Sec. 3, Tp. 3, Range 23, west 3rd Meridian. This branch is already in operation from Moose Jaw to Assiniboia, connecting there with the Weyburn-Lethbridge line, and the section approved of covers the 32.3 miles southerly and westerly, through the Wood Mountain district towards Consul, also on the Weyburn-Lethbridge line. A contract for grading of 35 miles southerly and easterly from Consul was let in 1919 and it was reported in the Saskatchewan Legislature last spring that 12.3 miles had been graded at the end of 1919. Work is reported to have been gone on with during this year.

**Acme to Empress.**—The Board of Railway Commissioners has approved combined plan, profile and book of reference showing revised location (Alberta Land Survey) of portion of the Acme to Empress section of the Langdon North Branch, from Sec. 18, Tp. 20, Range 22, west 4th Meridian, mile 59.94, to Sec. 7, Tp. 29, Range 20, west 4th Meridian, mile 75.73.

**Alberta District.**—The Board of Railway Commissioners has authorized the rebuilding of bridge 45.5 on the Crownsnest Subdivision.

**Alberta District Betterments.**—Tenders were reported to be under consideration recently for the following works:—Replacing a 12 ft. concrete arch culvert at Lacombe; waterproofing, abutments, Saskatchewan Ave. bridge, Edmonton; alteration and extension of station at Stettler; replacing timber trestle bridge at Nevis, and erection of 30 miles of woven wire fencing.

Contracts have been let, a press report states, for the following works in this district:—To Bennett & White Construction Co., Calgary, Alta., turntable, coaling plant and ash plant, at an esti-

mated cost of \$40,000; to A. G. Creelman & Co., Calgary, Alta., locomotive house and boiler house at an estimated cost of \$60,000.

**Bassano, Alta.**—Contracts for construction of turntable, coaling plant and ash plant costing \$40,000 for C.P.R. has been let to Bennett & White Construction Co., Calgary, and for construction of roundhouse and boilerhouse costing \$60,000, to A. G. Creelman & Co., 212 7th Ave. W., Calgary.

**British Columbia District.**—The Board of Railway Commissioners has authorized the rebuilding of the following bridges:—17.1 over the Spuzzum River, Cascade Subdivision, and 28.6, on Nakusp Subdivision.

**Coquitlam Freight Shed.**—The freight shed at Port Coquitlam, B.C., was destroyed by fire Aug. 5, and the passenger station narrowly escaped catching fire, in a fire which destroyed a number of stores and houses.

**Nanoose Bay Ferry Slip.**—A press report states that the new ferry slip at Nanoose Bay, Vancouver Island, is practically completed. The apron hoisting machinery was reported to have been shipped to the site on Aug. 9. (Aug., pg. 428.)

### Canadian National Railways Earnings.

	1920	1919
January . . . . .	\$ 7,727,562	\$ 6,787,517
February . . . . .	6,516,059	6,265,562
March . . . . .	7,761,326	7,160,036
April . . . . .	8,207,478	6,936,635
May . . . . .	8,305,860	7,884,287
June . . . . .	7,776,538	6,433,035
July . . . . .	9,003,674	7,896,685
	\$54,838,497	\$49,363,757

### Canadian Northern Railway System.

	1920	1919
January . . . . .	\$4,200,700	\$4,026,000
February . . . . .	3,862,300	3,363,800
March . . . . .	4,587,700	3,554,350
April . . . . .	4,732,623	3,878,149
May . . . . .	4,863,500	4,337,750
June . . . . .	4,364,600	3,181,000
	\$26,611,423	\$22,291,049

### Canadian Pacific Railway Earnings, Expenses, Etc.

Gross earnings, working expenses, net earnings, and increases or decreases, from Jan. 1, 1920, compared with those of 1919:

	Gross	Expenses	Net	Increases or decreases
Jan. \$13,914,569	\$13,328,628	\$ 585,941	\$ 967,571	
Feb. 13,557,104	12,843,231	713,873	*267,242	
Mar. 15,715,937	13,758,171	1,957,766	418,721	
Apr. 15,929,416	13,587,570	2,341,846	253,222	
May 16,459,986	13,262,044	3,197,942	164,182	
June 16,480,574	13,849,757	2,630,817	*359,604	
July 17,375,761	15,756,275	1,619,486	*1,377,218	

\$109,433,347 \$95,385,675 \$13,047,672 \*\$2,135,510  
Incr. \$17,990,717 \$20,126,227  
Decr. . . . . \$2,135,510

\*Decreases.  
The expenses for July include provision for estimated increase under new wage award for July.

### Grand Trunk Railway Earnings, Expenses, Etc.

Gross earnings, working expenses, net earnings, and increases or decreases, from Jan. 1, 1920, compared with those of 1919:

	Gross	Expenses	Net	Decrease
Jan. 5,054,034	\$ 5,867,445	\$ *813,411	\$ 97,406	
Feb. 4,660,831	5,159,742	498,911	188,987	
Mar. 5,756,372	5,491,293	265,079	575,215	
Apr. 5,477,816	5,187,340	290,476	465,592	
May 5,878,934	5,547,513	331,421	337,200	
	\$26,827,987	\$27,253,333	\$ 425,346	\$1,664,400
Incr. \$2,194,867	\$3,859,267			
Decr. . . . .			\$1,664,400	

## Canadian National Railways Construction, Betterments, Etc.

**Tenders for Ties.**—Tenders were received to Aug. 31 for ties to be made and delivered between Dec. 1, 1920, and Nov. 1, 1921, as follows:—Eastern Lines:—400,000 to be delivered on District 5 National Transcontinental Ry. south of the St. Lawrence River; 1,000,000 to be delivered on Halifax Division, Intercolonial Ry., and 100,000 to be delivered on Halifax & Southwestern Branch.

**Central Lines:**—50,000 to be delivered on Canadian National lines in Lake St. John District; 625,000 to be delivered on Canadian National lines between Armstrong and Quebec; 25,000 to be delivered on Canadian National lines between Ottawa and Quebec; 50,000 to be delivered on Canadian National lines in Central Ontario; 750,000 to be delivered on Canadian National lines between Pembroke and Port Arthur.

**Western Lines:**—50,000 to be delivered on Duluth, Winnipeg & Pacific Ry. in Minnesota; 400,000 to be delivered on Canadian National lines between Port Arthur and Rainy River; 25,000 to be delivered on Canadian National lines in Minnesota; 50,000 to be delivered on Canadian National lines in Manitoba; 1,000,000 to be delivered on Canadian National lines between Armstrong and Winnipeg; 600,000 to be delivered on Canadian National lines in Alberta, and 875,000 to be delivered on Canadian National lines in British Columbia.

**Halifax Southwestern Ry.**—The Board of Railway Commissioners has authorized the rebuilding of the following bridges between Halifax and Yarmouth, N.S.:—Port Wade Subdivision:—Over Riverdale River, mile 9.8; Feindels bridge, mile 18; over La Have River, mile 18.2; over Shannon River, mile 37.5. Caledonia Subdivision:—Over Pleasant River, mile 12.5. Liverpool Subdivision:—Over East Pubnico River, mile 217.8; over Pubnico River, mile 220; over Big Brook, mile 221.3; over Rider's Brook, mile 227.7; over Argyle River, mile 229.6; over Tusket River, mile 238.1; over Salmon River, mile 239.7; and over Acadia stream, mile 242.8.

**Coaling Plant Contracts.**—We are officially advised that a contract has been given to Williams & Wilson Co., Montreal, for the construction of mechanical coaling plants as follows:—Point Tupper, N.S., 100 tons capacity; Pirate Harbour, N.S., 100 tons; Truro, N.S., 250 tons; Newcastle, N.B., 100 tons.

**St. John Improvements.**—A press report says that the work in progress at the C. N.R. Island yard at St. John, N.B., comprises grading for yard extension, diversion of creek, construction of three pile trestles, signal and telegraph changes, drainage and fencing changes, rearrangement of existing main line and yard tracks, and the laying of new tracks. The approximate quantities of the principal items which this work covers are: rock cut, 5,000 cu. yd.; fill, 45,000 cu. yd.; creek diversion, 60,000 cu. yd.; ballast, 10,000 cu. yd.; lifting and relaying tracks, 3.3 miles; switches, 27; laying new tracks 4.7 miles, switches 31; relining existing tracks, 2.3; two double track pile trestles; one single track pile trestle.

A recent press report states that the warehouse leased to T. McAvity & Sons on McLeod's Wharf, St. John, was being valued preparatory to being sold to the C.N.R., and that it will be pulled down and the site used for additional tracks to be laid next spring.

**St. John River Bridge, Fredericton.**—Tenders were received to Aug. 21 for the construction and completion of the substructure for a single track railway bridge over the St. John River at Fredericton, N.B., which will be part of the work being done in connection with the development of the through C.N.R. route from the National Transcontinental line at McGivney Jct., over a section of the old Canada Eastern Ry. into Fredericton, and thence over the recently completed section of the St. John & Quebec Ry. to St. John. The bridge will be 1,932 ft. 7½ in. long from face to face of ballast walls on abutments, with an elevation of 34 ft. to base of rail, the ordinary high water level being 19.87 ft., low water being 1.98 ft., and lowest point in the river bed being 19.0. The bridge will be built 65 ft. south, or down stream, from the present bridge. The substructure will consist of 2 concrete abutments, 9 piers with granite faced noses, 1 pivot pier, 2 dock-filled timber rest piers for swing span. One pier is to be taken to solid rock foundation and the others will be on pile foundations. The superstructure will consist of one 70 ft. deck plate girder span; two 163¼ ft. through truss spans, five 238½ ft. through truss spans, one 241½ ft. through truss swing span and one 60 ft. deck plate girder span.

**Petitcodiac River Bridge.**—Tenders were received to Aug. 28 for the construction of the substructure of a single track railway bridge near Salisbury, N. B., at mile 1.4 on the Albert Subdivision, viz., the line from Salisbury to Albert. The bridge will be located on the center line of the present bridge. It will be 433 ft long face to face of ballast walls on abutments, and will have an elevation of 49 ft. to base of rail. The extreme high water at spring freshet is 36 ft. 5 in., at ordinary high tide 26 ft. 2 in., and at ordinary low tide 16 ft. 8 in. The substructure will consist of 3 concrete piers, on solid rock foundation, and an alteration of 2 old abutments. The superstructure will consist of 4 pony truss spans, each 105 ft. long.

**St. Lawrence Subdivision Revisions.**—Contracts have been let for clearing, fencing, grading and building trestles, culverts and bridge substructures, on the following deviations of main line on the St. Lawrence Subdivision, Canadian Northern Quebec Ry. as follows:—Burril deviation, between Glenada and St. Boniface, mile 87.6 to 91.6; East Yamachiche deviation, between St. Boniface and Charette, mile 94.82 to 96.3; St. Ursule deviation, between Fremont and St. Justin, 110.15 to 114.89; to Angus Sinclair, contractor, Toronto; St. Paulin deviation, between Charette and St. Paulin, mile 101 to 104.6, to V. T. Bartram, contractor, Toronto. Full information as to the objects of these deviations, their character, etc., was given in Canadian Railway and Marine World for July.

**Charney to Quebec Bridge.**—A press report states that a contract has been let to J. R. O'Neil for building a line from Charney, about 8 miles east of Levis, Que., to the Quebec Bridge, and that work has been started.

**Quebec District Structures.**—A press report states that a contract has been let to W. M. Fletcher & Co., Toronto, for the erection of 8 concrete bridge and other structures at points on Quebec District.

**Forfar to Findley, Ont.**—A recent

Kingston press report stated that an engineering party had arrived at Seeley's Bay to lay out a line for a connecting railway to be built from Forfar, mile 195 from Toronto on the C.U.R. Toronto-Ottawa line, to Findley, mile 173.90 from Toronto on the G.T.R. Toronto-Montreal line, and that the construction of this piece of line would place Kingston in direct communication with Ottawa and shorten by 25 miles the distance between the two cities, by combining the C.N.R. and G.T.R. lines. We are advised that a preliminary survey of a rough kind was made, but that the building of such a line has not been seriously considered by the management, nor have outside representations been made as to the desirability of building it.

**Western Line Betterments Contracts.** A press report states that contracts for the following works have been let:—Locomotive house addition at Fort Frances, Ont., estimated cost of \$20,000, to Claydon Co., Winnipeg; addition to locomotive house at Swan River Man., estimated cost \$20,000, to Claydon Co., Winnipeg; locomotive house and water tank at Eaton, Sask., to E. M. Nesbitt Co., Edmonton, Alta.; alteration to station buildings and locomotive house at Prince Albert, Sask., to H. H. Luke, Prince Albert; erection of locomotive house and machine shop at Saskatoon, Sask., estimated cost \$125,000, Shannon Bros., Saskatoon.

**Moose Jaw Subway.**—A press report states that a reinforced concrete subway is under construction at Moose Jaw, Sask., at an estimated cost of \$60,000, P. M. Graham being the contractor.

**Prince Albert to Paddock Wood.**—The route map of the branch under construction from Prince Albert, Sask., northerly to the Paddock Wood district, shows a line branching off from the present line on the north bank of the Saskatchewan River and proceeding northerly to Little Red River, thence northerly and easterly, crossing the Garden River, in the direction of Paddock Wood. Hatt & Sibbald have a contract for grading the first 22 miles of the line.

**Turtleford Southeasterly Branch.**—The Board of Railway Commissioners has approved of location plans for an extension from Turtleford, Sask., to Sec. 4, Tp. 48, Range 12, west of the 3rd Meridian, mile 0 to 68.7. A contract was let in June to the Western Construction Co., North Battleford, Sask., for grading 22 miles of this line.

**Alberta Line Plans.**—The Board of Railway Commissioners has approved of a plan and profile showing location of a line through Tps. 26 and 25, Ranges 1 and 2, west 4th Meridian, Alta., and has authorized the construction of the line across 8 highways. The area within which this line is routed is just west of the Saskatchewan-Alberta boundary and south of the Saskatoon-Calgary line, which crosses that boundary at Alask.

**Kamloops - Vernon - Lumby - Kelowna Branch.**—The Board of Railway Commissioners has approved of plan, profile and book of reference showing revised location through D.L. 474, group 1, Kamloops Division, B.C. D. B. Hanna, President, C.N.R., is reported to have met the Kamloops City Council, Aug. 2, while on his trip over the western lines, and to have stated that he expected that all C.N.R. trains would run into the city within 30 days thereafter. He, how-



ever, held out little hope that the branch line to Vernon and other points in the Okanagan Valley would be completed this year, as he feared it would be impossible to procure the rails.

**Vancouver Terminals.**—Various questions connected with the terminal and other works for the C.N.R. in Vancouver, B.C., was under discussion between the Minister of Railways and D. B. Hanna, President, C.N.R., on the one hand, and the Vancouver City Council on the other, during the recent visit of the Minister and the President. The provision of these terminal facilities and other works is called for under an agreement made between the city council and the Canadian Northern Pacific Ry. Co., to which agreement the B.C. Government is a party, and for the carrying out of which works the government has guaranteed the principal and interest of terminal bonds. In connection with the carrying out of a large work of reclamation at False Creek flats. The transfer of the C.N.P. Ry. properties to the Dominion Government brought in a new factor, and the negotiations which took place resulted in the laying before the city council of a memorandum from Mr. Hanna, setting out the work the Canadian National Rys. proposed to do, and the adoption of a resolution by the city council on July 28 approving of the same. The memorandum, after an introductory statement as to the changed conditions since the original agreement was signed, stated that the Canadian National Rys. did not desire to evade the terms of the original agreement, but would carry them out in their entirety, with the following exceptions:—The building of the proposed hotel; the electrification of the terminals, and the construction of a tunnel. These two latter works would only be proceeded with at a future date when they might be essential in the public interest and when financial conditions permitted. The Canadian National Rys. will proceed to carry to completion the terminal work at False Creek, which includes filling, the removal of the bridge, lowering of Main St., paving the same and so forth, and in addition will assume any and all liability in connection with the Champion and White difficulty, so that the injunction may be removed and the work of completing the sea wall proceeded with at once. The memorandum pointed out that there had already been expended on these works a larger amount than the agreement called for, and that in order to complete them according to the terms of the memorandum additional sums aggregating over \$1,000,000 would be required. Since the agreement as to the construction of the tunnel and the electrification of the terminal lines was made, an agreement had been made with the Great Northern Ry. which secured the C.N.R. entrance into Vancouver, provision being made for the construction of additional lines. In view of this and in view of the government policy as to capital expenditures, it was considered to be in the best interests of all to defer these works.

**New Westminster-Vancouver Line.**—The Minister of Railways, and D. B. Hanna, President, C.N.R., met representatives of the New Westminster City Council and the New Westminster Board of Trade, July 28, with regard to the agreement between the city and the Canadian Northern Pacific Ry. Co. for the construction of its main line to Vancouver through the city. Mr. Hanna is reported to have said that the company had agreed to carry its industrial track

to the North Arm of the Fraser River. That agreement would be carried out as soon as the money was available, but as to whether the line would then go on further towards Vancouver he could not say. The Minister of Railways is reported to have said that as far as he was concerned as soon as finances permitted the C.N.R. main line would be built through New Westminster, practically upon the terms of the original survey.

In connection with this matter the New Westminster City Council is reported to have given permission Aug. 11 for the building of a commercial track from the Fraser River Bridge along Front St. to near Lytton Square, and for the erection of a temporary freight shed at the end of the line in Lytton Square, subject to the railway agreeing to continue to pay city taxes on the property.

**Victoria Terminals.**—Work is reported to have been started upon the erection of a locomotive house and machine shops at Point Ellice bridge, on the Songhees Reserve, as part of the C.N.R. terminal facilities in Victoria, B.C., Robertson & Partners being the contractors. The contract price is said to be \$39,500.

The Minister of Railways and D. B. Hanna, President, C.N.R., visited the terminal site, July 26, and inspected the work in progress. The Minister is reported to have advised the Premier of British Columbia that the survey of the land required for terminal purposes south of Point Ellice bridge would be proceeded with, and that upon the transfer of the property from the B.C. Government to the C.N.R. the construction of the remainder of the terminal would be gone on with. (Aug., pg. 436.)

### Suggestions to Shippers by Rail.

The Railway Association of Canada has issued the following bulletin:—

A machine broke down from being run at too low a speed! For lack of moisture in the factory air, a cotton fabric failed to take smoothly its rubber surfacing—the air made the nap stand out. In other words, your goods or any man's goods or service require at least some consideration from the user if they are to do justice to themselves. All your pains go to waste if your customer or client neglects to use your product as it is intended to be used. And so with railway service to you. While the constant vigilance of the managements must keep up the performance of actual railway staffs, nothing but voluntary co-operation can maintain the shipping efficiency of that other part of the transportation machine, the consignor and the consignee. Consequently, while attending as closely as possible to their own interior efficiency, Canadian railways must appeal to the users of railway service with regard to the exterior efficiency of the transport system. May we suggest, therefore, that you instruct your secretary to prepare for you a report somewhat along the following lines:

1. As to containers.—What is our shipping room staff using to pack our goods? Is it really a cheap container? Or is its seeming cheapness offset by the loss of time, or temper, and possibly of customers by its frequent failure to protect our shipments? Or by the worry and fuss and loss of time in having to duplicate orders that should have gone through unbroken in the first place?

Is our container pilfer-proof? Is it, for example, a carton sealed with strip

paper? Easily slit and resealed? Or is it protected with wire seals less easily violated?

Are our men using a crate where they could use plain sacking—as in the case of a certain cushion manufacturer, who cut the weight of a shipment in two by using burlaps? Or should we crate our goods on six sides where we now protect only four?

Are we using cardboard where we should use crating, or a solid box?

2. Marking.—How does our shipping room staff address our shipments? With good clean whole stencils? Or with daubs of a worn-out paint brush? Do the invoices show the name and address of our customer clearly and accurately—including the name of the county and province? Or is there a temperamental scribbler making them out? Do the markers copy them from the invoice just as clearly? Or with one eye on the invoice and the other on Bill Brown's imitation of Babe Ruth on the ball field?

Do they use tags that are easily torn off? Or is the marking placed where it can't come off? And will be seen easily?

Has your head shipper a copy of the Canadian Freight Association's rules and regulations?

3. Bills of lading.—Who makes them out. Does he or she write a fair hand? Even so, why are they not made out on the typewriter, most people can use a machine well enough for that purpose?

4. Time of shipment.—Does our shipping room work overtime? If so, is it necessary? Is there any reason why the work should be bunched at the end of the day? Or could some of it be got rid of, for example, in the morning when the freight sheds are not so rushed?

We venture to suggest enquiry along these lines, and improvement wherever possible along the lines indicated. Your co-operation in using railway service in the best possible way will be of great assistance to the carriers, and, therefore, to all Canadian industry.

### Postal Railway Tunnel in London.

A 9 ft. tunnel about 6½ miles long for carrying automatic railway trains to transport mail is about to be built in London, Eng. Plans were developed some years ago, and in fact the operating system was worked out by the help of an experimental line reproducing both grades and curves of the proposed railway. The tunnel is to extend from the Paddington district post office to the Whitechapel post office. It is to carry two tracks of 24 in. gauge, and the trains operating on these tracks are to be handled by remote control. On account of the necessity of avoiding other tunnels and subsurface structures, the depth of the tunnel below ground surface will vary from 28 to 87 ft. At stations the tracks are to be separated about 20 ft., to accommodate elevators and mail chutes between them.

**Railways Employes Wages.**—In appearing before the Board of Railway Commissioners, in Ottawa, Aug. 20, in support of the Railway Association of Canada's application for increased freight and passenger rates, H. G. Kelley, President of the Association, and of the G.T. R. and the G.T. Pacific Ry., said that the association had decided to recommend Canadian railways to adopt the new schedule fixed by the U.S. Labor Board, at Chicago, July 20, which would involve an increased expenditure of some \$65,000,000 a year.

## Merging the Grand Trunk Ry. System into Canadian National Railways.

### Transfer of Grand Trunk Pacific Ry. Management to Canadian National Railways.

The following order in council, no. 1,595, was approved by the Governor General on July 12, but not made public until about the middle of August:—"The committee of the Privy Council have had before them a report, dated July 9, from the Minister of Railways and Canals, submitting as follows: That by virtue of an order in council passed on Mar. 9, 1919, confirmed by chapter 22 of the statutes of 1919, he was appointed receiver of the Grand Trunk Pacific Ry. System as in such order defined. That pursuant to the provisions of the Grand Trunk Ry. Acquisition Act, 1919, and of the agreement made thereunder, which was confirmed by statute passed at the last session of Parliament, a committee of management of the G.T.R. System has been appointed for the purpose of ensuring the operation of that system, in so far as it is possible to do so, in harmony with the Canadian National Rys., the two systems being treated, in the public interest, as nearly as possible as one system. That by reason of the appointment of such committee of management and the co-operation therewith of the board of directors of the Canadian Northern Ry. Co., which board controls the management and operation of the Canadian National Rys., large economies have already been effected, and improvements made, through co-operation in respect of both the G.T.R. System and the Canadian National Rys. and other improvements in facilities and service are in contemplation, with the view of effecting still further savings in the joint management and operation.

"That the board of directors of the Canadian Northern Ry. Co. have advised the Minister that still further economies may be effected, without impairing the efficiency of the railway service, by placing the management and operation of the Grand Trunk Pacific Ry. System under the same management as the Canadian National Rys., and they have recommended that steps be taken to that end. That heretofore the management and operation of the Grand Trunk Pacific Ry. System has been conducted by the Minister as receiver, through the officers and staff of the respective companies composed in such system as contemplated by the original order in council. It is provided in clause 10 of the said order as follows:—'All officers except the board of directors of any company included in the Grand Trunk Pacific Ry. System, shall continue to discharge for the government receiver, till further orders or directions by him, duties in connection with the operation and management of the undertakings and work of any company included in the G.T.P. Ry. System, similar to their present duties, so that no interruption in the operation and management thereof may occur.' That the Minister is advised that he has power, under the said clause, by 'further orders or directions' to vary the duties of the said officers and staff and to arrange for the effective co-ordination in the operation and management of the G.T.P. R. System with the Canadian National Rys. as herein outlined. That President Kelley, the executive head of the G.T.R. System, has signified to the Minister that it would be of material advantage, and cause a large saving in cost of operation, if said railways were operated un-

der one management, and therefore recommends such arrangement being carried out.

"In view of these facts and the recommendations of the executive heads of the Canadian National Rys. and of the G.T. R., the Minister recommends that he be authorized to place the operation and management of the G. T. Pacific Ry. System under those who now, or may hereafter, compose the board of directors of the Canadian Northern Ry. Company, as defined as aforesaid, with power, as incidental to such management, to appoint and discharge officers and staff, and to do all things necessary to ensure the operation of the said system in harmony with the Canadian National Rys.; it being understood, however, that the issuance and control of receiver's certificates for the purpose of financing be reserved to the Minister as receiver, as heretofore; and that all actions of the said board of management which if done by him as receiver would have required the authorization or sanction of the Exchequer Court of Canada, be done by the said board only upon, or with, such authorization or sanction. The Minister also recommends that such appointment be made for an indefinite term, terminable at any time, either by himself as receiver, or upon the instructions of the Exchequer Court of Canada. The Minister further recommends that the foregoing arrangement be subject to the approval of the Exchequer Court of Canada. The committee concur in the foregoing recommendation and submit the

### Extensions of Jurisdiction.

Hon. J. D. Reid, Minister of Railways and Canals, as Receiver, Grand Trunk Pacific Ry. Co., issued the following circular Aug. 23:—"In pursuance of order in council 1595 and with a view of effecting every economy by means of co-ordination of organization; effective Aug. 23, the management of the Grand Trunk Pacific Ry. for the Receiver, is placed under the board of directors of the Canadian National Rys. W. P. Hinton, heretofore Vice President and General Manager, G.T.P.R., having resigned as General Manager, is hereby appointed Consulting Officer to the Receiver with headquarters at Winnipeg."

D. B. Hanna, President, Canadian National Rys., issued circulars, Aug. 23, stating that in pursuance of authority issued by the Receiver, under which the management of the Grand Trunk Pacific Ry. has been placed under the board of directors of the Canadian National Rys., the jurisdiction of the following officers of the Canadian National Rys. has been extended over the G.T.P.R. lines, viz., A. J. Mitchell, Vice President in charge of Accounts and Finance; R. C. Vaughan, Assistant to President; M. H. MacLeod, Vice President in charge of Operating, Maintenance and Construction; S. J. Hungerford, Assistant Vice President in charge of Operating, Maintenance and Construction; C. A. Hayes, Vice President in charge of Traffic; Gerard Ruel, General Counsel.

The jurisdiction of the following Canadian National Rys. officials has been extended over the Grand Trunk Pacific Ry. and the Grand Trunk Pacific Coast Steamship Co.—A. E. Warren, General Manager, Western Lines, Winnipeg; H. H. Melanson, Passenger Traffic Manager, Toronto; Geo. Stephen, Freight Traffic Manager, Toronto; R. Creelman, Assistant Passenger Traffic Manager,

Winnipeg; W. G. Manders, Assistant Freight Traffic Manager, Winnipeg; E. Langham, General Purchasing Agent, Toronto.

A. A. Tisdale, heretofore Assistant to Vice President and General Manager, also Purchasing Agent, G.T.P.R., Winnipeg, is reported to have been appointed Assistant to General Manager, C.N.R. and G.T.P.R., at Winnipeg.

H. H. Brewer, heretofore General Superintendent, G.T.P.R., Winnipeg, has been appointed Assistant General Manager, C.N.R. and G.T.P.R., with jurisdiction over Canadian National lines west of Armstrong, Ont., and west of including Port Arthur, Ont., to Lobstick Jct., Alta., also G.T.P.R. lines from Winnipeg to Edmonton, inclusive, with office at Winnipeg. J. R. Cameron, heretofore Assistant General Manager, C.N.R., Winnipeg, has been appointed Assistant General Manager, C.N.R. and G.T.P.R., with jurisdiction over C.N.R. lines west of Lobstick Jct., Alta., and over G.T.P.R. lines west of Edmonton, Alta., including Vancouver Island lines, with office at Vancouver.

W. E. Duperow, heretofore General Passenger Agent, G.T.P.R. and G.T.P. Coast Steamship Co., Winnipeg, has been appointed General Passenger Agent, C.N.R. and G.T.P.R. from and including Port Arthur, Ont., to Lucerne, B.C. Lucerne station on the C.N.R. is 263.1 miles west of Edmonton, Alta., and is west of the Yellowhead Pass. On the G.T.P.R., the station is 258 miles west of Edmonton. His office is at Winnipeg. S. Osborne Scott, heretofore General Passenger Agent, Western Lines, C.N. Rys., Winnipeg, has been appointed General Passenger Agent, C.N. Rys., and G.T.P.R., with territory Lucerne, B.C., and west, including G.T.P. Coast Steamship Co. Office, Vancouver, B.C.

The following officers have been given jurisdiction over freight traffic on the Canadian National, Duluth, Winnipeg & Pacific, and Grand Trunk Pacific Rys., lines west of Duluth, Minn., Port Arthur and Armstrong, Ont., viz.:—A. E. Rosevear, heretofore General Freight Agent, G.T.P.R., has supervision of grain, grain products and live stock. J. M. Horn, heretofore General Freight Agent, C.N.R., has supervision of traffic not otherwise assigned. J. M. Macrae, heretofore Assistant General Freight Agent, C.N.R., has been appointed Assistant General Freight Agent of the three lines mentioned above. W. Hatley, heretofore Assistant General Freight Agent, C.N.R., has been given supervision of the publication of tariffs and divisions of the three lines mentioned above.

### Co-ordination of Services, Grand Trunk Ry. and Canadian National Rys.

In addition to the appointments in the traffic departments of both lines, mentioned in Canadian Railway and Marine World for August, the following have been made since:—

E. F. Flinn, heretofore General Freight Agent, G.T.R., Lines West, will also act as General Western Freight Agent, Canadian National Rys.

R. F. Clark, General Agent, Freight Traffic, Canadian National Rys., continues in that capacity.

C. A. Gormaly, Foreign Freight Agent, G.T.R., Lines West, will also act in same capacity for Canadian National Rys.

J. D. McDonald, General Passenger Agent, G.T.R., Lines West, will also act

as General Western Passenger Agent, Canadian National Rys.

C. G. Orthenburger, General Agent, Passenger Department, G.T.R., will also act in same capacity for Canadian National Rys.

Detroit, Mich.—W. H. Spicer, heretofore District Freight Agent, G.T.R., Lines West, in charge of Michigan Territory, will also act for Canadian National Rys., vice F. A. Shaw, General Agent, transferred.

H. H. Hamill, General Agent, Freight Department, G.T.R., Lines West, will also act in same capacity for Canadian National Rys.

G. H. Burgis, General Agent, Passenger Department, G.T.R., will also act in same capacity for Canadian National Rys.

Duluth, Minn.—C. A. Skog, Division Freight and District Passenger Agent, Canadian National Rys., will also act as District Passenger Agent, Grand Trunk Pacific Ry.

Grand Rapids, Mich.—A. Z. Mullins, General Agent, G.T.R., Lines West, will also act in same capacity for Canadian National Rys., Freight Department.

London, Ont.—A. S. Munro, Commercial Agent, G.T.R., will also act in same capacity for Canadian National Rys.

Milwaukee, Wis.—H. W. Ploss, Commercial Agent, G.T.R., Lines West, will also act in same capacity for Canadian National Rys. Freight Department.

Minneapolis, Minn.—G. H. Brown, General Agent, G.T.R. Freight Department, Lines West, will also act for Canadian National Rys.

W. J. Gilkerson, General Agent, Passenger Department, G.T.R., will also act in same capacity for Canadian National Rys.

Montreal.—D. O. Wood, heretofore Traffic Manager, Export and Import Department, Canadian National Rys., Toronto, has been appointed General Foreign Freight Agent, Canadian National-Grand Trunk Rys., with office in Board of Trade Building, Montreal. He has general supervision of these railways export and import traffic, via Atlantic and Pacific Coast ports.

R. J. Foreman, heretofore Assistant to Vice President, Traffic, G.T.R., has been appointed Foreign Freight Agent, Canadian National-Grand Trunk Rys.

J. A. Wright, heretofore Assistant Foreign Freight Agent, G.T.R., has been appointed Assistant Foreign Freight Agent, Canadian National-Grand Trunk Rys.

St. Louis, Mo.—W. H. Burke, General Agent, G.T.R., Lines West, will also act in same capacity for Canadian National Rys. Freight Department.

St. Paul, Minn.—A. H. Davis, General Agent, Freight and Passenger Departments, Canadian National Rys., will also act in same capacity for the Grand Trunk Pacific Ry.

Saginaw, Mich.—C. E. Wagner, Commercial Agent, G.T.R., Lines West, will also act in same capacity for Canadian National Rys. Freight Department.

Stratford, Ont.—V. G. Snell, Division Freight Agent, G.T.R., Stratford, Ont., will also act in same capacity for Canadian National Rys.

Toronto.—F. R. Porter, heretofore Assistant General Freight Agent, G.T. Pacific Ry., Winnipeg, has been appointed Foreign Freight Agent, Canadian National-Grand Trunk Rys., Toronto.

Geo. Pepall, heretofore Assistant Foreign Freight Agent, G.T.R., has been appointed Assistant Foreign Freight Agent, Canadian National-Grand Trunk Rys.

F. G. Gould, heretofore City Freight Agent, G.T.R., will also act in the same capacity for Canadian National Rys.

Quebec.—P. Mooney, Assistant General Freight Agent, Canadian National Rys., will also act as General Agent, Freight Department, G.T.R.

#### Arbitration of G.T.R. Stock Values.

It is expected that the arbitrators, Sir Walter Cassells, Right Hon. Sir Thos. White, and W. H. Taft, will hold an organization meeting in Montreal, in September, but no announcement has been made as to the date.

#### Aerial Transportation Notes.

G. M. Crail has been appointed Air Station Superintendent at Summerland, B.C., under the Canadian Air Board.

Canadian Vickers Ltd., Montreal, will, it is said, install facilities for assembling seaplanes for the Canadian Air Board.

Two of the six air craft which are to constitute the equipment of the government flying station at Jericho Beach, B. C., are reported to have been delivered.

A London, Eng., cable states that during the first year of civil flying in England there were 38,954 flights, and that there was only one fatal accident.

An Ottawa press report of Aug. 18 stated that the report that aerial trips from Halifax, N.S., to the Pacific coast, to be made in 50 hours, would soon be started, were premature, and that no decision has been reached as to when the experimental trip would be made.

A Paris cablegram states the Germans will attempt to outdo every other nation in aerial transportation, and that airships are to be built 800 ft. long, 80 ft. wide and 100 ft. high; driven by 34 gasoline motors of from 150 to 200 h.p. each. Each airship will, it is said, be fitted with 300 cabins with two beds in each, and other accommodation similar to that on an ocean liner. Each ship will have an air speed of 68 miles an hour, with a radius for a non-stop flight of 8,000 miles, and will land in water, in which their speed will be 35 miles an hour. The flight time from Germany to New York will be approximately 50 hours.

The Civil Service Commission is about to appoint two air certificate examiners for the Air Board, at an initial salary of \$2,400 a year, to be increased by \$180 a year until a maximum of \$3,300 a year has been reached. The duties of the examiners will be, under the direction of the Superintendent of Certificate Branch, Air Board, to examine, approve, and recommend the issue of licenses to air pilots, navigators, and engineers; to examine, approve, and recommend the issue of certificates of airworthiness of flying machines; to examine, approve, and recommend the issue of licenses to aerodromes; to assist in the selection of, and make recommendations in connection with, the issue of licenses to aerodromes.

The U.S. aerial express no. 1, stated to be the largest seaplane on the American continent, arrived at Toronto, Aug. 11, from New York, on its way to Cleveland, Ohio. It covered the 984 miles between New York and Toronto in 9 hr. 24 min., the trip from Montreal occupying 3 hr. 22 min. The maximum speed attained was 115 miles an hour, with an average on the whole journey of about 100 miles an hour. She was built at the U.S. Navy yard, Philadelphia, and left there Aug. 6 for Atlantic City, and she

left Toronto Aug. 12 for Cleveland. She is equipped with 2 motors of 400 h.p. each, has a wing spread of 110 ft. and is capable of lifting 6,200 lb. The cabin is divided into 7 compartments, the forward one being fireproof for mail; behind is the pilot's cabin, with accommodation for two persons; the third division is the main cabin, with accommodation for 8 persons, and behind this again is the observation section, with glass sides and seating accommodation for 6, and there is also a smoking compartment with accommodation for 7 passengers and a place for baggage. The machine was in charge of T. F. Dunn, President of the U.S. Aerial Express Co., and it is stated that a regular service will be inaugurated, probably early in 1921, calling at Toronto, Buffalo, Cleveland and Detroit.

#### The Edmonton, Dunvegan & British Columbia and Allied Railways' Position.

The three railway companies in Alberta promoted by J. D. McArthur, of Winnipeg, are the Edmonton, Dunvegan & British Columbia Ry. Co., the Central Canada Ry. Co., and the Alberta & Great Waterways Ry. Co. Of these the first named has built a railway from Edmonton City boundary to Spirit River, 360.8 miles, with a branch from Spirit River to Grand Prairie, 54.8 miles; the Central Canada Ry. Co. has built a line from McLennan to Peace River, 49.8 miles, while the Alberta & Great Waterways Ry. Co. has built a line from Carbondale for about 290 miles, approximately to Fort McMurray, the E. D. & B.C. Ry. being the main stem. After negotiations, which had been in progress for a considerable time, the Alberta Government has taken over the Alberta & Great Waterways Ry. and the other two lines have been, without a change of ownership, given over for operation to the C.P.R. for five years. The members of the Alberta Government have been appointed directors of the Alberta & Great Waterways Ry. Co., with the Premier as President. An arrangement has been made under which J. D. McArthur may buy the line within seven years on repayment of the money expended by the government during its period of control.

The other two lines have been taken over by the C.P.R. under an operating agreement for five years. D. C. Coleman, Vice President, Western Lines, C. P.R., is reported to have said in a recent interview:—"I should like to underline the portion of the Premier's statement which describes the agreement as covering an operation arrangement only. The C.P.R. has not acquired the stock of the company, but has only undertaken to manage the property for a term of years on behalf of the owners and those interested through advances and guarantees. The election of a new board of directors was agreed to in order that the C.P.R. should have full control of the operating and the reconstruction of the road, subject, of course, to proper scrutiny of all expenditure by representatives of the Alberta Government, and by others who have an interest in the property. The agreement also embodies an option to purchase, which may be exercised by the C.P.R. at any time during the life of the agreement." tion with air routes; to conduct examinations in the theory and practice of air pilotage and air navigation; and to perform other related work as required.

## Transportation Appointments Throughout Canada.

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

**Canadian Government Merchant Marine Ltd.**—F. G. WOOD, heretofore General Agent, Freight Department, Canadian National-Grand Trunk Rys., Pittsburg, Pa., has been appointed Ontario Freight Agent, Canadian Government Merchant Marine Ltd., vice G. E. Bunting, whose appointment as Representative for Australia and New Zealand, Auckland, New Zealand, was announced in a recent issue. Office, Toronto.

**Canadian National Rys.**—L. E. AYER, heretofore General Agent, St. Louis, Mo., has been appointed General Agent, Freight Department, Kansas City, Mo.

J. H. CORCORAN has been appointed General Travelling Agent. Office, Moncton, N.B.

J. H. DUFF has been appointed Superintendent, Edmundston, N.B., vice W. F. Sawyer, transferred.

J. IRWIN, heretofore Superintendent, Calgary, Alta., has been appointed Superintendent, Edmonton Division, Western District, vice W. E. Robert, resigned. Office, Edmonton, Alta.

J. E. LeBLANC, heretofore District Passenger Agent, Montreal, has been appointed District Passenger Agent, Quebec, Que., and his former position, and that of Assistant General Passenger Agent, Quebec, Que., have been abolished. Office, 7 Dufort St.

W. F. SAWYER, heretofore Assistant Superintendent, Edmundston, N.B., has been appointed Assistant Superintendent, St. Maurice Division, Quebec, Que.

R. M. STUBBS has been appointed City Freight Agent, St. Paul, Minn.

The Cochrane Division, extending from O'Brien to Cochrane, not including O'Brien; Cochrane to Hearst; Hearst to Grant; Grant to Armstrong, including Armstrong, W. B. WAY, Superintendent, Cochrane, Ont., has been detached from the Central District, Western Lines, from Aug. 1, and incorporated into the Quebec District, Eastern Lines.

**Canadian National Rys.-Grand Trunk Pacific Ry.**—The Minister of Railways and Canals, as Receiver G.T.P.R. Co., gave notice on Aug. 23 that in pursuance of order in council 1595, and with a view of effecting every economy by means of co-ordination of organization, the management of the G.T.P.R., for the Receiver, had been placed under the board of directors of the Canadian National Rys. and that W. P. HINTON, theretofore Vice President and General Manager, G.T.P.R. Co., having resigned as General Manager, had been appointed Consulting Officer to the Receiver, with headquarters at Winnipeg.

D. B. Hanna, President, Canadian National Rys., issued circulars Aug. 23 stating that in pursuance of authority issued by the Receiver, under which the management of the G.T.P. Ry. had been placed under the board of directors of the Canadian National Rys., the jurisdiction of the following officers of the Canadian National Rys. had been extended over the G.T.P.R. lines, viz., A. J. MITCHELL, Vice President in charge of Accounts and Finance; R. C. VAUGHAN, Assistant to President; M. H. MacLEOD, Vice President in charge of Operating, Maintenance and Construction; S. J. HUNGERFORD, Assistant

to Vice President in charge of Operating, Maintenance and Construction; C. A. HAYES, Vice President in charge of Traffic; GERARD RUEL, General Counsel.

The jurisdiction of the following Canadian National Rys. officials has been extended over the Grand Trunk Pacific Railway and the Grand Trunk Pacific Steamship Co.:—A. E. WARREN, General Manager, Western Lines, Winnipeg; H. H. MELANSON, Passenger Traffic Manager, Toronto; GEO. STEPHEN, Freight Traffic Manager, Toronto; R. CREELMAN, Assistant Passenger Traffic Manager, Winnipeg; W. G. MANDERS, Assistant Freight Traffic Manager, Winnipeg; E. LANGHAM, General Purchas-



D. O. Wood,  
General Foreign Freight Agent, Canadian National-Grand Trunk Rys.

ing Agent, Toronto.

H. H. BREWER, heretofore General Superintendent, G.T.P.R., Winnipeg, has been appointed Assistant General Manager, C.N.R. and G.T.P.R., with jurisdiction over C.N.R. lines west of Armstrong, Ont., and west of and including Port Arthur, Ont., to Lobstick Jct., Alta., also over G.T.P.R. lines from Winnipeg to Edmonton, Alta., inclusive. Office, Winnipeg.

J. R. CAMERON, heretofore Assistant General Manager, C.N.R., Winnipeg, has been appointed Assistant General Manager, C.N.R. and G.T.P.R., with jurisdiction over C.N.R. lines west of Lobstick Jct., Alta., and over G.T.P.R. lines west of Edmonton, Alta., including C.N.R. Vancouver Island lines. Office, Vancouver, B.C.

W. E. DUPEROW, heretofore General Passenger Agent, G.T.P.R. and G.T.P. Coast Steamship Co., Winnipeg, has been appointed General Passenger Agent, with jurisdiction over the passenger traffic of the Canadian National, Duluth Winnipeg & Pacific and Grand Trunk Pacific Rys., lines west of Duluth, Minn., Port Arthur and Armstrong, Ont., and east of Lucerne, B.C. Office, Winnipeg.

W. HATLEY, heretofore Assistant General Freight Agent, C.N.R., Winnipeg, will have supervision of the publication of tariffs and divisions of freight traffic, of the Canadian National, Duluth Winnipeg and Pacific and Grand Trunk Pacific Rys., lines west of Duluth, Minn., Port Arthur and Armstrong, Ont. Office, Winnipeg.

J. M. HORN, heretofore General Freight Agent, C.N.R., Winnipeg, will have supervision of freight traffic, other than grain, grain products and live stock, on the Canadian National, Duluth Winnipeg and Pacific and Grand Trunk Pacific Rys., lines west of Duluth, Minn., Port Arthur and Armstrong, Ont. Office, Winnipeg.

J. M. MACRAE, heretofore Assistant General Freight Agent, C.N.R., Winnipeg, has been appointed Assistant General Freight Agent, Canadian National, Duluth Winnipeg and Pacific, and Grand Trunk Pacific Rys., lines west of Duluth, Minn., Port Arthur and Armstrong, Ont. Office, Winnipeg.

A. E. ROSEVEAR, heretofore General Freight Agent, G.T.P.R., Winnipeg, will have supervision of grain, grain products and live stock traffic, on the Canadian National, Duluth Winnipeg and Pacific and Grand Trunk Pacific Rys., lines west of Duluth, Minn., Port Arthur and Armstrong, Ont. Office, Winnipeg.

S. OSBORNE SCOTT, heretofore General Passenger Agent, Western Lines, Canadian National Rys., Winnipeg, has been appointed General Passenger Agent, with jurisdiction over the passenger traffic of the Canadian National, Duluth Winnipeg and Pacific and Grand Trunk Pacific Rys. in the territory Lucerne, B.C., and west, including Grand Trunk Pacific Steamship Co. Office, Vancouver, B.C.

A. A. TISDALE, heretofore Assistant to Vice President and General Manager and also Purchasing Agent, G.T. Pacific Ry., is reported to have been appointed Assistant to the General Manager, Western Lines, Canadian National Rys., and G.T. Pacific Ry., Winnipeg.

**Grand Trunk Pacific Ry.**—See Canadian National Rys.-Grand Trunk Pacific Ry. Canadian National Rys.-Grand Trunk Pacific Ry.—G. H. BROWN, Commercial Agent, G.T.R., Minneapolis, Minn., has also been appointed General Agent, Freight Department, C.N.R., there.

J. H. BURGIS, General Agent, Passenger Department, Western Lines, G.T. R., Detroit, Mich., will also act in the same capacity there for the C.N.R.

W. H. BURKE, Commercial Agent, G.T.R., St. Louis, Mo., has also been appointed General Agent, Freight Department, C.N.R., there.

E. F. FLINN, General Freight Agent, Western Lines, G.T.R., Chicago, Ill., has also been appointed General Western Freight Agent, C.N.R., there.

R. J. FOREMAN, heretofore Assistant to Vice President (Traffic), G.T.R., Montreal, has been appointed Foreign Freight Agent, Canadian National-Grand Trunk Rys. Office, Montreal.

W. J. GILKERSON, General Agent, Passenger Department, Western Lines, G.T.R., Minneapolis, Minn., will also act in the same capacity there for the C.N.R.

C. A. GORMALY, heretofore Division Freight Agent, G.T.R., Chicago, Ill., has been appointed Foreign Freight Agent, Western Lines, G.T.R., and will also act

in the same capacity for the C.N.R., his former position being abolished. Office, Chicago.

F. G. GOULD, City Freight Agent, G. T.R., Toronto, will also act in the same capacity for the C.N.R.

H. H. HAMILL, General Agent, Freight Department, G.T.R., Detroit, Mich., will also act in the same capacity there for the C.N.R.

J. D. McDONALD, General Passenger Agent, Western Lines, G.T.R., Chicago, Ill., has also been appointed General Western Passenger Agent, C.N.R., there.

P. MOONEY, Assistant General Freight Agent, C.N.R., Quebec, Que., has also been appointed General Agent, G. T.R., there.

A. Z. MULLINS, Division Freight Agent, G.T.R., Grand Rapids, Mich., has also been appointed General Agent, Freight Department, C.N.R., there.

A. S. MUNRO, Commercial Agent, G. T.R., London, Ont., will also act in the same capacity for the C.N.R.

C. G. ORTTENBURGER, General Agent, Passenger Department, Western Lines, G.T.R., Chicago, Ill., will also act in the same capacity there for the C.N.R.

G. PEPALL, Assistant Foreign Freight Agent, G.T.R., Toronto, will also act in the same capacity there for the C.N.R.

H. W. PLOSS, Commercial Agent, G. T.R., Milwaukee, Wis., has also been appointed General Agent, Freight Department, C.N.R., there.

F. R. PORTER, heretofore Assistant General Freight Agent, Grand Trunk Pacific Ry., Winnipeg, has been appointed Foreign Freight Agent, Canadian National-Grand Trunk Rys., Toronto.

V. G. SMITH, Division Freight Agent, G.T.R., Stratford, Ont., will also act in the same capacity for the C.N.R. there.

W. H. SPICER, District Freight Agent, G.T.R., Detroit, Mich., will also act in the same capacity there for the C.N.R., vice F. A. Shaw, General Agent, Freight Department, C.N.R., transferred.

C. E. WAGNER, Commercial Agent, G.T.R., Saginaw, Mich., will also act in the same capacity there for the C.N.R.

D. O. WOOD, heretofore Traffic Manager, Export and Import Freight Department, C.N.R., Toronto, has been appointed General Foreign Freight Agent, Canadian National-Grand Trunk Rys., with general supervision of the export and import traffic of these railways through Atlantic and Pacific ports, and his former position has been abolished;

A. F. Read, General Foreign Freight Agent, G.T.R., having, at his own request, been relieved of official duties, on account of ill health, and granted leave of absence until Dec. 31, when he will be superannuated. Office, Board of Trade Building, Montreal.

J. A. WRIGHT, Assistant Foreign Freight Agent, G.T.R., Montreal, will also act in the same capacity for the C.N.R.

The Canadian Nationals Rys. Passenger Tariff Bureau has been transferred to new offices in the G.T.R. Passenger Traffic Department, McGill St., Montreal, and for the present R. F. Macleod, Assistant to Passenger Traffic Manager, C. N.R., continues in charge of, and has immediate supervision over, the C.N.R. Passenger Tariff Bureau.

Canadian Pacific Ry.—W. S. HALL, heretofore Trainmaster, Red Deer, Alta., has been appointed Superintendent, Cranbrook Division, British Columbia District, vice C. S. Maharg, transferred to Vancouver. Office, Cranbrook.

R. A. McADAM has been appointed Master Mechanic, Smiths Falls Division,

Quebec District, vice C. A. Wheeler. Office, Smiths Falls, Ont.

C. S. MAHARG, heretofore Superintendent, Cranbrook Division, British Columbia District, Cranbrook, has been appointed Superintendent, Vancouver Division, British Columbia District, vice J. L. Jamieson, whose appointment as Superintendent, Edmonton Division, Alberta District, Edmonton, was announced in our last issue. Office, Vancouver.

Chicago & North Western Ry.—B. H. BENNETT has been appointed General Canadian Agent, with office at Toronto, which position he occupied prior to the taking over of United States railways by its Federal Government. Recently he has been Travelling Agent, with headquarters at DeKalb, Ill.

Cunard Line, Anchor-Donaldson Line, Anchor Line.—F. C. TURNER, heretofore Travelling Passenger Agent, Robert Reford Co., Montreal, has been appointed Travelling Passenger Agent, Montreal.

Edmonton, Dunvegan & British Columbia Ry., Central Canada Ry.—LT. COL. J. G. REID, heretofore in charge of construction of C.P.R. Lanigan North Branch, has been appointed Chief Engineer and Superintendent, in charge of maintenance and operation.

F. W. STERLING, District Freight Agent, C.P.R., Edmonton, Alta., has also been appointed District Freight Agent,

E.D. & B.C.R. & C.C.R. there.

Grand Trunk Ry.—J. CAMERON, heretofore Chief of Tariff Bureau, Chicago, Ill., has been appointed Assistant General Freight Agent, Western Lines. Office, Chicago, Ill.

J. M. SPARLING, heretofore chief clerk to Vice President (Traffic), has been appointed Assistant to Vice President (Traffic), vice R. J. Foreman, promoted. Office, Montreal.

H. C. SWARTZ, Master of Bridges, and Buildings, Southern Division, St. Thomas, Ont., has been appointed Superintendent of Bridges and Buildings, Eastern Lines, as reported in our last issue, vice J. H. Johnston, assigned to other duties. Office, Montreal.

L. A. VERONEAU has been appointed Chief of Tariff Bureau, Western Lines, Chicago, Ill., vice J. Cameron, promoted.

Pacific Great Eastern Ry.—A. B. BUCKWORTH, for some time representing the interests in British Columbia of E. R. C. Clarkson & Sons, auditors, Toronto, and latterly in charge of the liquidation of the Spokane & British Columbia Ry., has been appointed Manager, P.G.E.R., which is owned by the British Columbia Government. Office, Vancouver, B.C.

R. WILSON, heretofore Auditor, has been appointed Assistant General Manager and Comptroller. Office, Vancouver, B.C.

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

Alaska Ry.—A recent epidemic of influenza disorganized the construction forces on the northern division of this U.S. Government work and delayed it considerably.

Esquimalt & Nanaimo Ry.—A press report states that a contract has been let to G. F. Wilson, Nanaimo, B.C., for the erection of a station building there, at an estimated cost of \$25,000. The specifications are said to call for a frame building 131 ft. x 36 ft., finished outside in brick veneer and roughcast, on a concrete basement. The central portion of the building will be two storeys, the upper story to be set apart as rooms for employes.

Owing to some delays in the approval of plans for the substructure of the proposed new bridge at Johnston St., Victoria, to invite tenders for the work. The toria, the city council has not yet been bylaw provides for construction starting on Sept. 1, but it was stated Aug. 6 that a contract could not be let in the time. It was said, however, that the city engineer would put some men at work on certain fills necessary for the bridge and its approaches. The bascule section of the bridge is being provided by the E. & N. Ry. Co. (June, pg. 297.)

Grand Trunk Pacific Ry.—In an interview, on his return to Ottawa on Aug. 8, from a trip over the Canadian National Rys. and the G.T. Pacific Ry., the Minister of Railways is reported to have said that the G.T.P.R. will require a considerable expenditure to be made on it to bring its roadbed up to standard. The work would include the rebuilding of a number of bridges and the filling in of a number of trestles.

While at Prince Rupert, B.C., July 23, the Minister is reported to have expressed surprise at the condition of the terminal facilities there, and to have in-

formed the citizens at a public meeting that he would take up the question of the provision of adequate terminals with Canadian National Rys. officials and have the work proceeded with as soon as possible. (Aug., pg. 248.)

Kettley Valley Ry.—We are officially advised that a contract has been let to W. P. Salvus, Penticton, B.C., for grading a line from South Penticton to the head of Dog Lake, about two miles. The work is without any feature of engineering interest. This is the first section of a line to be built from Penticton southward to near the International Boundary, for which an agreement was entered into between the company and the British Columbia Government. The second section of the line is to extend from the south end of Dog Lake to a new townsite near Fairview, but we are officially advised that it is not likely this will be put under construction this year. In order to provide for the settlers in the district the company has bought from the C.P.R. Co. the steamship York, to be transferred to Dog Lake and used in hauling freight and towing barges. Provision is made in the agreement with the B.C. Government for the construction at a later date of a line along one side of the lake to connect the two sections of line. (Aug., pg. 428.)

Northern Light Rys. Co.—A press report states that negotiations are in progress for placing the bonds of this company, which proposes to build light railways in the northern mining camps of Ontario, to link them up with the Timiskaming & Northern Ontario Ry. Another report states that surveys have been completed for a line from Elk Lake to Gowganda, and that surveys are being made for a line from Swastika to the Kirkland Lake and the Larder Lake areas. (Aug., ug. 428.)

**Spokane International Ry.**—A press report states that improvements estimated to cost about \$300,000 have been authorized to be made on this line during the next 12 months. The line extends from Spokane, Wash., to the International Boundary at Eastport, Wash., on the U.S. side, and at Kingsgate on the Canadian side, with a C.P.R. branch line.

**Timiskaming & Northern Ontario Ry.** A deputation of miners waited upon the Ontario Government recently to urge the construction of a branch line from Swastika to the Kirkland Lake and Larder Lake mining districts, about 22 miles. The Premier is reported to have said in reply that the government must be assured by investigation that the possibilities of traffic to and from the mines would warrant the construction of such a line. (July, pg. 387.)

### Occupation of Toronto New Union Station Offices.

The Toronto Terminals Ry. Co., which is building the new union station, has had its offices in the building for some time past, U. E. Gillen, General Manager; J. R. Ambrose, Chief Engineer, and other officials being located in the center wing on the fourth floor. The whole of the eastern wing will be devoted to post office purposes, the second, third and fourth floors in the western wing will be devoted to offices, and there will also be some other offices in the center wing, on the third and fourth floors. Final arrangements for the allotment of the office space between the different railways have not been completed. In the meantime it is said that in the western wing the second floor will be divided between the C.P.R. and G.T.R. and possibly the Canadian National Rys., the C.P.R. will have the whole of the third floor, and the fourth floor will be divided between the Canadian National Rys. and the G.T.R.

The following C.P.R. officials will remove their offices Sept. 15, from the old union station building to the new one, viz.:—H. C. Grout, General Superintendent; W. M. Neal, Assistant General Superintendent; W. Tansley, Car Service Agent; F. Ronaldson, Master Mechanic; Lt. Col. Blair Ripley, C.B.E., D.S.O., District Engineer; F. M. Rutter, Superintendent, Bruce Division; H. J. Humphrey, Superintendent, Trenton Division; W. B. Howard, District Passenger Agent; M. H. Brown, Division Freight Agent; S. Wertheim, Superintendent, Sleeping, Dining and Parlor Car Department; H. Eisdale, Paymaster; J. W. Schliehauf, Claims Agent; E. Bury, Commissary Agent.

The following G.T.R. officials will move from the old union station to the new one about Sept. 15:—C. H. Bowker, General Superintendent; W. S. Wilson, Superintendent of Transportation; G. A. Stokes, Superintendent, Toronto Terminals; E. G. Hewson, Division Engineer; L. I. Stone, Assistant Engineer, Toronto Terminals; G. A. Mitchell, Superintendent, Bridges and Buildings; H. Ferguson, Superintendent of Tack, also W. H. Patton, Superintendent of Signals.

The following Canadian National officials will also move about Sept. 15, from their present uptown offices to the new union station, where they will occupy offices in the north section of the fourth floor, viz.:—General Superintendent's organization, Superintendent's organization, Supervisor of Boarding Cars de-

partment, and the telegraph office. The traffic department will probably move from the Royal Bank Building to the second floor of the new union station.

**Cornwall Interswitching Arrangements.** The Board of Railway Commissioners, in the matter of the proposed cancellation by the C.P.R., G.T.R. and New York Central Rd. of the existing interswitching arrangements with Cornwall St. Ry., Light & Power Co., which were to take effect Aug. 2, ordered on July 30 that the portions of the steam railway companies schedules which provided for the abrogation of the arrangements be suspended until further order.

### Grand Trunk Railway Construction, Betterments, Etc.

**G.T.R.-Canadian National Rys. Connections.**—The Board of Railway Commissioners has authorized the G.T.R. to make connection with the Canadian National Rys. on Lot. 10, Con. 1, Brighton Tp., Ont., and on Lot 21, Con. 2, Richmond Tp., near Napanee, Ont.

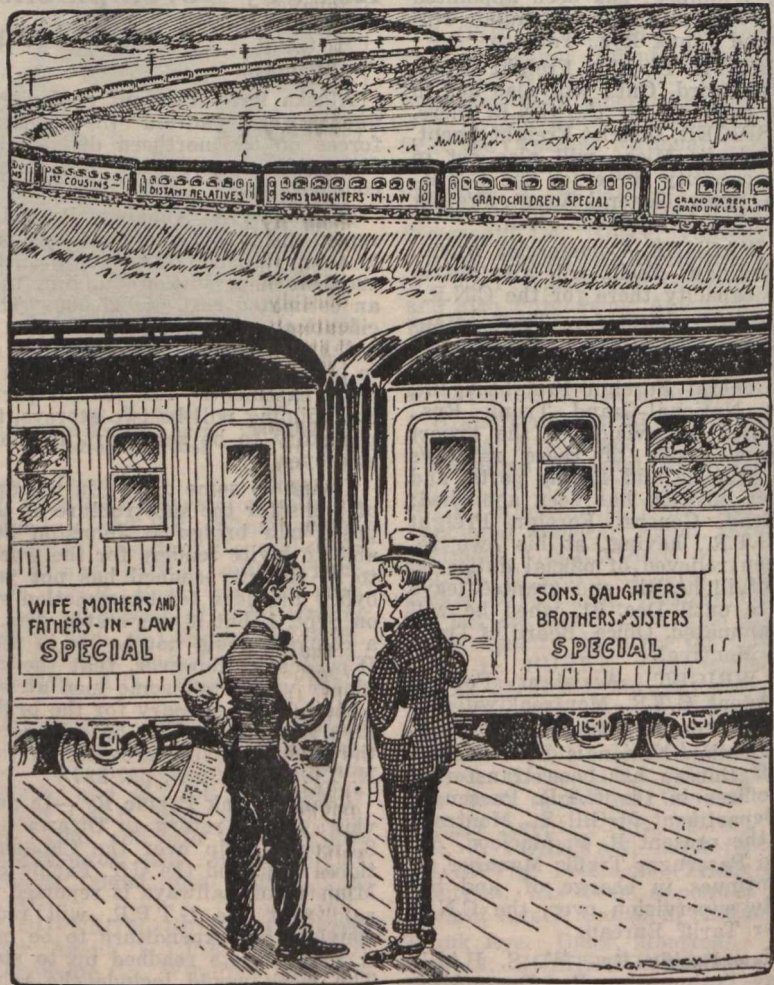
**East Toronto Bridge Rebuilding.**—The Board of Railway Commissioners has authorized the G.T.R. to rebuild, by Sept. 30, 1921, the bridge over its tracks at Main St., Toronto. The bridge is near York station, in the old municipality of East Toronto. The new structure is to be 46 ft. wide, with sidewalks 10 ft. wide on each side of the bridge, the bridge to be decked with cement. The City of

Toronto is to pay the cost of surfacing the bridge and approaches, and also of making the bridge of a greater width than that named in the order.

**Palmerston, Ont., Terminals.**—A press report states that additional land has been secured at Palmerston, Ont., for a car repairing plant. The bridge and building department is reported to be clearing the side and getting things in order for the immediate building of the shop.

**London Track Elevation.**—The report of the City Engineer on the proposed elevation of the G.T.R. tracks in the city is under consideration by the City of London's crossings committee. The report is said to recommend the placing of subways in the east end of the city, at Adelaide and Rectory Sts., and an overhead walkway for pedestrians at Egerston St. The cost of the subways, it is suggested, be borne 40% by the city and 60% by the railway. The position of affairs in the west end is not dealt with, as it is expected that the Canadian National Rys. will take steps, at an early date, to erect station in conjunction with the Canadian Pacific Ry. and the London & Port Stanley Ry. (Aug., pg. 436.)

**Komoka Bridge Rebuilding.**—The Board of Railway Commissioners has authorized the G.T.R. to rebuild the overhead bridge carrying the highway over its line at mile 127.98, about 1.75 miles east of Komoka, Ont., on the line between London and Sarnia.



**ECONOMY EXTRAORDINARY.**

Taxpayer—Does that long train contain tourists or immigrants?  
Station Master—Neither! Only an Ontario Farmer's Economy Government Minister on an official trip.

**EDITOR'S NOTE.**—Hon. Beniah Bowman, M.L.A., Minister of Lands and Forests, in the Ontario Government, made a Northern Ontario tour recently, in the government's official car Whitney, accompanied by members of his family and several relatives, which caused considerable comment.

A. G. Racey in Montreal Star.

# Canadian Railway AND Marine World

ESTABLISHED 1898.

Devoted to Steam and Electric Railway, Marine, Shipbuilding and Railway, Harbor and Canal Contractors' Interests.  
Official Organ of various Canadian Transportation Associations.

Published on the first of each month at 70 Bond Street, Toronto, Canada.

ACTON BURROWS,  
Proprietor and Editor.

AUBREY ACTON BURROWS,  
Business Manager.

Assistant Editors,  
JOHN KEIR and DONALD F. KEIR

United States Business Representative,  
A. FENTON WALKER, 143 Liberty St., New York.

Member of  
Associated Business Papers,  
Audit Bureau of Circulations  
Canadian National Newspapers  
and Periodicals Association,  
Canadian Press Association,

Authorized by the Postmaster General for Canada, for transmission as second class matter.

SUBSCRIPTION PRICE, including postage anywhere, \$2 a year in advance.

SINGLE COPIES, 25 cents each, including postage.

The best method of remitting is by express or post office money order. If remittance is made by cheque, 15 cents should be added to cover cost of collection unless cheque is payable at par in Toronto or Montreal.

**NOTICE TO ADVERTISERS.**

ADVERTISING RATES furnished on application.  
ADVERTISING COPY must reach the publishers by the 10th of the month preceding the date of the issue in which it is to appear.

TORONTO, CANADA, SEPTEMBER, 1920.

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## Application for Increases in Freight and Passenger Rates.

Canadian Railway and Marine World for August contained the application made by the Railway Association of Canada to the Board of Railway Commissioners for an increase in freight rates. The following additional application, including also passenger, sleeping and parlor car, excess baggage and milk rates, was addressed to the board by the association on July 28, over the signatures of Howard G. Kelley, President, and C. P. Riddell, General Secretary:—

"Referring to the application dated July 9, made by this association on behalf of the railway companies members thereof, and of all other railway companies within the jurisdiction of the board, for authority to make a general advance of 30% in the tolls at present charged for the carriage of freight by the said companies. It was set out that the increase in rates sought by that application was based entirely on present costs, and did not take into consideration any increase in wages or costs which might occur thereafter. Accordingly, we desire to take the earliest opportunity to draw the board's attention formally to the award of the United States Labor Board, decision 2, dated at Chicago July 20th, which provides for a very large increase in wages to be paid to all classes of employes on railways in the United States. Demands have already been made upon the various Canadian railway companies for the application to their employes of the same scale of advances, to take effect as from May 1 last. If such demands should be granted it would involve a very large additional annual outlay, which would necessitate a corresponding increase in the revenues of the companies.

"Accordingly, we have thought it advisable to bring these facts to the attention of the board, and to notify it that at the hearing, evidence will be submitted as to the additional expense involved if these demands are to be met, in order that the board may be in a position to grant authority to the railway companies to make such additional increases in freight and passenger rates as it may deem to be necessary to meet the altered conditions. After careful consideration, the representatives of the Canadian railway companies are of the opinion that if the increase in wages granted in Canada is to correspond with the increase recommended in the United States it will cost the Canadian companies an additional \$60,000,000 a year, and they will be unable to meet the situation without rate increases at least equal to those requested by the U.S. roads and now under consideration by the Interstate Commerce Commission. The Canadian companies will, therefore, on the hearing of the present application, request the board to authorize rate increases (in addition to the 30% required to take care of present conditions) at least equal to those requested in the U.S., which are as follows:

- "Passenger fares increased 20%, minimum not less than 10c.
- "Excess baggage rates 20%.
- "Surcharge on sleeping and parlor cars 50% of charge for space occupied.
- "Milk 40% (being 30% to equalize the increase asked for in original application and 10% additional).
- "Freight and switching revenues to be increased sufficiently to yield the balance of the revenue required to meet

the increased operating expenses due to the wage increase herein referred to, in addition to the percentage increase already proposed in this proceeding—such additional increase in the case of the U. S. roads being estimated at 10%

"On the hearing the Canadian companies will also urge that the board for the current year authorize such rates as will assure to the companies sufficient revenue to meet all increases on account of wages or materials properly chargeable to the operating expenses of that year. Copies of this letter have been sent to all the parties to whom the original application was sent."

The hearing on the application opened, before the Board of Railway Commissioners, in Ottawa, Aug. 10, the taking of evidence and arguments continuing until Aug. 21, when judgment was reserved. The case for the Railway Association of Canada was presented by F. H. Phippen, K.C., and for the individual railways by E. W. Beatty, K.C., President, and W. N. Tilley, K.C., Consulting Counsel, C.P.R.; D. B. Hanna, President, Canadian National Rys.; H. G. Kelley, President, G.T.R. and G.T. Pacific Ry.; and W. C. Chisholm, General Solicitor, G.T.R. Among the principal witnesses for the railways were W. J. Moule, Assistant Comptroller, C. P.R.; A. J. Hills, Assistant to President, Canadian National Rys.; J. B. McLaren, General Auditor, G.T.R.; G. D. Wadsworth, G. F. and P. A., Quebec Central Ry.; J. H. Coburn, Secretary, Essex Terminal Ry.

Among those who opposed the application were the following:—Nova Scotia Government, represented by R. E. Finn; Maritime Province interests, by E. M. Macdonald; Manitoba Government, by H. J. Symington; Saskatchewan Government and National Dairy Council, by D'Arcy Scott; City of Toronto, by G. R. Geary, K.C.; Canadian Manufacturers Association, by A. C. McMaster; United Farmers of Ontario, by G. Waldron; Canadian Wholesale Grocers Association, by Hugh Blain; Winnipeg and other western boards of trade, by J. B. Coyne; Canadian Retail Coal Association, by J. M. Daly; Eastern Live Stock Association, by C. W. Gearney; Western Live Stock Association, by J. L. Anderson; Canada Lumbermen's Association, by F. Hawkins, British Columbia Shingle and Lumber Manufacturers, by R. H. H. Alexander; Mountain Lumbermen's Association, by I. R. Poole. A number of individual interests were also represented.

### Victoria Bridge, Montreal, Damaged.

Considerable damage was done to the G.T.R. Victoria Bridge over the St. Lawrence River at Montreal, Aug. 22. A fire was discovered in the planking of the section devoted to general traffic, and before it could be extinguished about a third of the planking was partially or entirely destroyed. Traffic was not interrupted on the steam and electric railway sections, but vehicular traffic was stopped. Repair work was started the next day, and it was expected to have it completed by Aug. 30.

C.P.R. Cartage.—It was announced by the C.P.R. freight department in Montreal, recently, that its cartage will continue to be done by the Dominion Transport Co.

## Mainly About Railway People Throughout Canada.

**Joseph Orville Adams**, whose appointment as General Eastern Freight Agent, Canadian National-Grand Trunk Rys., New York, was announced in our last issue, was born at London, Ont., Nov. 21, 1872, and entered railway service Nov. 14, 1887, since when he has been to Apr. 30, 1902, messenger, clerk and chief billing clerk, G.T.R., London, Ont.; May 1, 1902 to Oct. 8, 1903, chief billing clerk, and chief clerk, Import Freight Department, G.T.R., Portland, Me.; Oct. 9, 1903 to Mar. 31, 1904, Agent, Central Vermont Ry., Willematic, Conn.; Apr. 1, 1904, to Feb. 29, 1908, Agent, same road, Barrie, Vt.; Mar. 1, 1908 to Jan. 1, 1915, General Agent, same road, Burlington, Vt.; Feb. 1, 1915, to June 14, 1917, Travelling Freight Agent, same road, Boston, Mass.; June 15, 1917, to Sept. 14, 1919, Commercial Agent, same road, New York; Sept. 14, 1919 to July 1920, General Eastern Freight Agent, G.T.R., New York.

**Leonard E. Ayer**, who has been appointed General Agent, Canadian National-Grand Trunk Rys., Kansas City, Mo., was born at Henderson, Ia., Jan. 11, 1877, and entered railway service, Apr. 9, 1898, since when he has been, to Sept. 1898, student station work, Burlington & Missouri River Rd. in Nebraska, Saronville and Fairmont, Neb.; Sept. 1898 to Nov. 1900, clerk, local freight office, Burlington Route, Sioux City, Ia.; Nov. 1900 to Apr. 1902, station ticket clerk, Chicago & North Western Ry., Sioux City, Ia.; Apr. 1902 to Nov. 1903, station ticket clerk, same road, Ashland, Wis.; Nov. 1903 to Nov. 1907, Contracting Agent, Duluth, South Shore & Atlantic Ry., Duluth, Minn.; Nov. 1907 to Aug. 1908, agent, Minnesota & International Ry., Tenstrike, Minn.; Sept. 1908 to Mar. 1911, City Ticket Agent, Duluth, Misabe & Northern Ry., Duluth, Minn.; Mar. 1911 to Apr. 1916, chief clerk, Canadian Northern Ry., Chicago, Ill.; Apr. 1916 to Sept. 1917, Commercial Agent, same road, St. Louis, Mo.; Sept. 1917 to Aug. 2, 1920, General Agent, C.N.R., St. Louis, Mo.

**George Murray Baillie**, whose appointment as Assistant Superintendent, London Division, Ontario District, C.P.R., Windsor, Ont., was announced in our last issue, was born at West St. John, N.B., Mar. 31, 1879, and entered C.P.R. service Nov. 25, 1895, since when he has been, to 1896, messenger, West St. John, N.B.; 1897 to 1898, car checker, West St. John, N.B.; 1899, freight clerk, Owen Sound, Ont.; 1900 to 1903, freight clerk, St. John, N.B.; 1904, freight clerk, Montreal; 1905, night agent, West St. John, N.B.; 1906 to 1918, agent, Fairville, N.B.; 1919 to May 1920, assistant agent, West St. John, N.B.

**George Hugh Brown**, who has been appointed General Agent, Freight Department, Canadian National-Grand Trunk Rys., Minneapolis, Minn., was born at West Lebanon, N.H., Oct. 17, 1876, and entered G.T.R. service Jan. 2, 1882; since when he has been, to Jan. 1, 1898, messenger, stenographer, clerk, Chicago, Ill.; Jan. 1, 1898, to July 1, 1915, Soliciting Freight Agent, Chicago; July 1, 1915, to July 1, 1918, Commercial Agent, Omaha, Neb.; July 1 to Nov. 1, 1918, Tariff Inspector, Chicago; Nov. 1, 1918, to Jan. 1, 1920, Travelling Representative, Chicago; Jan. 1 to Aug. 2, 1920, Commercial Agent, Minneapolis, Minn.

**Arthur Bernard Buckworth**, who has

been appointed General Manager, Pacific Great Eastern Ry., Vancouver, B.C., was born at Birmingham, Eng., Mar. 2, 1876, entered transportation service in 1896, and was to 1897 engaged in loading freight cars for C.P.R. at Vancouver, B.C.; 1898 to 1906, ticket agent, C.P.R., and land agent, Great Northern Ry., Ymir, B.C.; 1906 to 1912, engaged in timber contracting for railways; 1912 to 1918, representative at Vancouver, for E. R. C. Clarkson & Sons, Toronto, trustees and liquidators; 1918 to Aug. 1, 1920, Manager, under E. R. C. Clarkson & Sons, Spokane & British Columbia Ry., Vancouver, B.C.

**Sir George Bury**, formerly Vice President, C.P.R., Montreal, and latterly President and General Manager, Whalen Pulp & Paper Co., Vancouver, B.C., who resigned the latter position recently, left Montreal, Aug. 12, for Cuba. An un-



A. E. Warren.

General Manager, Western Lines, Canadian National Ry. and Grand Trunk Pacific Ry.

confirmed press report states that he has been asked by the Mexican Government to undertake the management of the reconstruction of the Mexican National Rys., and that this matter will have his attention on his return to Canada during September.

**A. D. Cartwright**, Secretary, Board of Railway Commissioners, Ottawa, spent August, with his family, at Brackley Beach, P.E.I.

**W. G. Chace**, Chief Engineer, Greater Winnipeg Water District, from 1913 to June last, when he resigned to organize Research & Development, Ltd., a Manitoba corporation purposing to initiate new industries in that province, based on its resources, and on such other commercial enterprises as might offer opportunity of success, has been appointed President and Manager, Canadian Lock Joint Pipe Co., Toronto.

**Mrs. D. C. Coleman**, wife of the Vice President, Western Lines, C.P.R., who

was spending part of the summer with her two boys, aged 8 and 5, at Lake Windermere Camp, near Inverness, B.C., was drowned while bathing there Aug. 24. It appears that, contrary to her usual practice, she went for a swim in the early morning, following a horse-back ride, and when about 50 ft. from the shore appeared to be in difficulties, and called for assistance. This was immediately rendered by a man in a canoe, but at a critical moment the canoe turned over, and Mrs. Coleman sank in deep water. She was an untiring worker in philanthropic work, and engaged a great deal in outdoor sports. On the day prior to her death, she took a principal part in the reception to the Imperial Press Conference delegates.

**A. H. Davis**, who has been appointed General Agent, Freight Department, Canadian National-Grand Trunk Rys., St. Paul, Minn., was born Jan. 14, 1876, and entered transportation service Nov. 12, 1890, with S. Cunard & Co., General Agents, Allan Line, Halifax, N.S., and transferred to C.P.R. steamship service on its organization, and was to May 1910 chief clerk at St. John, N.B., and Quebec, Que. In May, 1910, he was appointed Passenger Agent, Canadian Northern Steamships Ltd., Montreal, and on the sale of that company's ships to the Cunard Co. in Feb., 1915, he was appointed City Passenger Agent, Canadian Northern Ry., Winnipeg, and was subsequently appointed General Agent, Freight Department, same road, St. Paul, Minn.

**James Dunsmuir**, formerly director, C.P.R., and Lieutenant Governor of British Columbia, who died at Victoria, B.C., June 6, left an estate of the total value of \$3,597,583.08 gross, with debts and liabilities estimated at \$265,066.03. The inventory of the estate does not contain the Canadian Northern Ry. debenture stock mentioned in the will, but in an affidavit made in connection with the property, the amount of this stock, mentioned as having been transferred to the children in Feb., 1920, is stated as £764,719 12s. 4½d.

**W. H. Ellis**, M.A., M.B., LL.D., formerly Dean, Engineering and Applied Science Faculty, Toronto University, died in Muskoka Aug. 23, aged 74, as the result of a stroke, shortly after swimming.

**Roland J. Foreman**, who has been appointed Foreign Freight Agent, Canadian National-Grand Trunk Rys., Montreal, was born at Toronto, Dec. 31, 1878, and entered transportation service in August, 1892, since when he has been, to July 31, 1898, clerk and stenographer, G.T.R., Toronto; Dec. 1898 to 1902, stenographer, secretary and chief clerk to General Freight and Passenger Agent, and General Manager, Lake Erie & Detroit River Ry., Walkerville, Ont.; 1902 to Sept. 1904, chief clerk to Superintendent, Buffalo Division, same road, Walkerville and St. Thomas, Ont.; Sept. 1904 to Mar. 1906, chief clerk to Secretary-Treasurer, Canadian Freight Association, Toronto; Mar. 1906 to Dec. 1907, Assistant to Chairman of Advisory Committee, Canadian Freight Association, Montreal; Jan. 1908 to Jan. 1911, chief clerk, Tariff Bureau, Grand Trunk Pacific Ry., Winnipeg; Jan. 1911 to July 1913, Assistant General Freight Agent, G.T.P.R., Winnipeg; Aug. 1913 to July 1920, Assistant to Vice President (Traffic), G.T.R. and G.T.P.R., Montreal.



**A. Horace Gow**, whose appointment as General Freight Agent, Canadian National-Grand Trunk Rys., Ottawa, Ont., was announced in our last issue, was born there, Apr. 15, 1888, and entered railway service in July 1904, since when he has been, to Nov. 1905, clerk, Passenger Department, Canada Atlantic Ry., now part of the G.T.R., Ottawa, Ont.; Nov. 1905 to June 1911, clerk, Passenger Department, G.T.R., Montreal; June 1911 to Mar. 1917, clerk, Freight Department, G.T.R., Ottawa, Ont.; Mar. 1917 to July 1920, chief clerk, District Freight Agent's office, Canadian National Rys., Ottawa, Ont.

**Hon. G. P. Graham**, ex-Minister of Railways and Canals, Brockville, Ont., while spending a holiday at Staten Island, N.Y., fell with a seaplane into the ocean, on Aug. 14, owing to engine trouble when several miles from land, and was rescued by a motor boat, which put out from the shore.

**George H. Ham**, of the C.P.R. head office, underwent a minor operation in the Western Hospital, Montreal, early in August, and he was reported a few days later to be progressing satisfactorily.

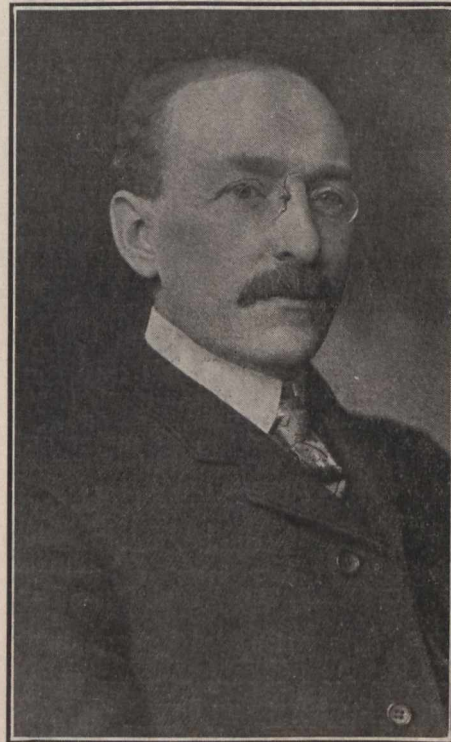
**C. A. Hayes**, Vice President, Canadian National Rys., left Toronto Aug. 24 on a business trip to the Pacific coast, expecting to be away about three weeks.

**C. O. Foss**, who has been appointed Chief Engineer, New Brunswick Hydro Electric Commission, was born in New Hampshire, Mar. 20, 1852, and from 1878 to 1884, was engaged in general engineering practice at Concord, N.H. From 1884 to 1904 he was Chief Engineer, Nova Scotia Central Ry., Bridgewater, N.S.; 1904 to 1908, Assistant District Engineer, National Transcontinental Ry., St. John, N.B.; 1908 to 1914, District Engineer, National Transcontinental Ry., St. John, N.B.; and in 1917 he was appointed Chief Engineer, St. John & Quebec Ry.

**H. H. Hamill**, who has been appointed General Agent, Freight Department, Canadian National-Grand Trunk Rys., Detroit, Mich., was born at Somerville, Mass., Apr. 6, 1874, and entered transportation service with the Johnson Steamship Line, Boston, Mass., in 1893, and from Feb. 1, 1900, to June 1, 1906, was city solicitor, National Despatch Line, Boston, Mass.; June 1, 1906, to Apr. 1, 1910, Travelling Agent, National Despatch-Great Eastern Line, Boston, Mass.; Apr. 1, 1910, to Nov. 1, 1911, Soliciting Freight Agent, G.T.R., New York City; Nov. 1, 1911, to June, 1914, Travelling Freight Agent, G.T.R., New York; June 1914 to Nov. 1918, Commercial Agent, G.T.R., Detroit, Mich.; Nov. 1918 to May 1919, General Agent, Freight Department, Lines in Canada, G.T.R., Detroit, Mich.; May 1919 to Mar. 1, 1920, General Agent, Freight Department, Grand Trunk Western Lines Rd. (U.S.R.A.), Detroit, Mich.; Mar. 1 to Aug. 2, 1920, General Agent, Freight Department, Western Lines, G.T.R. Detroit, Mich.

**William Pittman Hinton**, who has been appointed Consulting Officer to the Receiver of the Grand Trunk Pacific Ry. (the Minister of Railways and Canals), at Winnipeg, was born at Hintonburg, Ont., Aug. 30, 1871, and entered railway service May 3, 1887, since when he has been, to Aug. 1891, clerk, freight passenger and car accounts, and travelling auditor, Canada Atlantic Ry.; Aug. 1891 to Mar. 1898, rate clerk, same road, and accountant, Canada Atlantic Fast Freight Line; Mar. 1898 to June 30, 1901, Assis-

ant General Freight Agent, same road, and Canada Atlantic Transit Co.; June 30, 1910, to Jan. 30, 1913, General Freight Agent, same road; Jan. 30, 1903, to Oct. 1905, General Passenger and Freight Agent, same road; Oct. 1905 to Jan. 1907, General Agent, Passenger Department, G.T.R., Ottawa, Ont.; Jan. 1907 to Apr. 1909, Assistant General Passenger and Ticket Agent, same road, Montreal; Apr. 1909 to Feb. 1914, General Passenger Agent, Grand Trunk Pacific Ry., Winnipeg; Feb. to Oct., 1914, Assistant Passenger Traffic Manager, same road, Winnipeg; Oct. 1914 to Nov. 11, 1915, Assistant Passenger Traffic Manager, G.T.R. and Grand Trunk Pacific Ry., Montreal; Nov. 11, 1915, to Aug. 1, 1917, Traffic Manager, G.T.P.R. and Grand Trunk Pacific Coast Steamship Co., and Western Traffic Manager, Canadian Government Railways, Winnipeg; Aug. 1917 to Aug.



**J. D. McDonald**, General Western Passenger Agent, Canadian National Rys., and General Passenger Agent, Western Lines, Grand Trunk Ry.

23, 1920, Vice President and General Manager, G.T.P.R., Winnipeg. He resigned the position of General Manager, G.T.P.R., just prior to his present appointment.

**D. O. Lewis**, District Engineer, Vancouver Island Lines, Canadian National Rys., is one of the first of the engineers to be granted certificates in civil engineering, under the recently enacted Engineering Profession Act of British Columbia. Under this act, engineers have until July 1, 1921, to make application for membership in the Association of Professional Engineers, and to have their qualifications passed on by a board of examiners.

**Miss Julia MacInnes**, eldest daughter of W. R. MacInnes, Vice President in charge of Traffic, C.P.R., Montreal, is to be married to Phillip Durnford, on Sept. 8.

**J. D. McDonald**, General Passenger Agent, Western Lines, G.T.R., Chicago, Ill., who has also been appointed General Western Passenger Agent, Canadian National Rys., Chicago, Ill., was born at Toronto, Aug. 27, 1855, and en-

tered G.T.R. service in 1868, since when he has been, to 1870, messenger, Toronto; 1870 to 1875, Assistant Ticket Agent, Toronto; 1875 to 1896, Ticket Agent, Buffalo, N.Y.; 1896 to May 1902, City Passenger and Ticket Agent, Buffalo, N.Y.; May 1902 to Mar. 1, 1911, District Passenger Agent, Toronto; Mar. 1, 1911, to Oct. 1918, Assistant General Passenger Agent, Chicago, Ill.; Oct. 1918 to May 1919, Assistant General Passenger Agent, Chicago, Ill.; Oct. 1918 to May 1919, Assistant General Passenger Agent, Eastern Regional District, U.S. Railroad Administration, Chicago, Ill.; May 1919 to Mar. 1, 1920, General Passenger and Baggage Agent, Grand Trunk Western Lines Rd. (U.S.R.A.), Chicago, Ill.; Mar. 1 to Aug. 2, 1920, General Passenger Agent, Western Lines, G.T.R., Chicago, Ill.

**C. S. Maharg**, who has been appointed Superintendent, Vancouver Division, British Columbia District, C.P.R., Vancouver, was born in Dufferin County, Ont., Feb. 4, 1867, and entered C.P.R. service in Apr. 1885, since when he has been, to Feb. 1888, freight brakeman; Feb. 1888 to May 1893, freight conductor; May 1893 to Dec. 1901, passenger conductor; Dec. 1901 to June 1902, rule instructor; June to Aug. 1902, passenger conductor; Aug. 1902 to Dec. 1904, Trainmaster, District 1, Ontario Division; Dec. 1904 to June 1906, Trainmaster, Kenora, Ont.; June to Aug. 1906, Assistant Superintendent, Kenora, Ont.; Aug. 1906 to Feb. 28, 1907, Assistant Superintendent, Moose Jaw, Sask.; Feb. 28, 1907, to Dec. 1908, Superintendent, District 3, Central Division, Brandon, Man., and Superintendent, District 5, Central Division, Saskatoon, Sask.; Dec. 1908 to Oct. 1918, successively, Superintendent, District 2, Western Division, Medicine Hat, Alta., Superintendent, District 3, Western Division, Calgary, Alta., and Superintendent, Brandon Division, Manitoba District, Brandon, Man.; Oct. 1918 to Aug. 1920, Superintendent, Cranbrook Division, British Columbia District, Cranbrook, B.C.

**A. A. Maver**, formerly Master Mechanic, G.T.R., Montreal, died at Jersey City, Aug. 7, aged 71. He was born at Brechin, Scotland, and came to Canada at an early age. He commenced railway work as an apprentice in the G.T.R. Montreal shops and was successively Locomotive Foreman at Richmond, Que., and Toronto, and while at Toronto was appointed Assistant Mechanical Superintendent, Great Western Ry., now part of the G.T.R., after which he was appointed Erecting Foreman, G.T.R., Stratford, Ont., and in 1896, Locomotive Foreman, London, Ont. In Aug. 1901 he was appointed Master Mechanic, G.T.R., Montreal, and continued in that position until his retirement on superannuation a few years ago. The funeral, at Montreal, Aug. 10, was attended by a number of railway officials.

**P. Mooney**, who has been appointed Assistant General Freight Agent, Canadian National-Grand Trunk Rys., Quebec, Que., was born at St. Catherines, Que., Apr. 19, 1871, and entered railway service Nov. 1889, since when he has been, to Dec. 1897, stenographer and chief clerk to Superintendent Intercolonial Ry., Riviere-du-Loup, Que.; Mar. 1898 to Feb. 1901, clerk in General Freight and Passenger Department, Quebec & Lake St. John Ry., Quebec; Feb. 1901 to Mar. 1906, chief clerk, General Freight and Passenger office, Great Northern Ry. of Canada, Quebec; Mar. 1906 to Jan. 1907, District Freight and Passenger

Agent, Halifax & South Western Ry., Halifax, N.S.; Jan. 1907 to Feb. 1917, Division Freight and Passenger Agent, Halifax & South Western Ry., Halifax, N.S.; Feb. 1917 to Dec. 1918, Assistant General Freight Agent, lines east of Port Arthur, Canadian Northern Ry., Toronto; Jan. 1919 to July 1920, Assistant General Freight Agent, Canadian National Rys., Quebec, Que.

A. Z. Mullins, who has been appointed General Agent, Freight Department, Canadian National-Grand Trunk Rys., Grand Rapids, Mich., was born at Appin, Ont., Feb. 14, 1862, and entered G.T.R. service Feb. 10, 1884, since when he has been, to May 1887, telegraph operator, Komoka, Ont.; May 1887 to Oct. 1896, rate clerk, chief clerk and Travelling Freight Agent, Buffalo, N.Y.; Oct. 1896 to Apr. 1900, Agent, National Despatch-Great Eastern Line, Grand Rapids, Mich.; Apr. 1900 to June 1907, Agent, Lackawanna-Grand Trunk Line, Detroit, Mich.; July 1907 to Apr. 30, 1919, Commercial Agent, Grand Rapids, Mich.; May 1919, Division Freight Agent, G.T.R., Grand Rapids, Mich.; May 1919 to Mar. 1, 1920, Division Freight Agent, Grand Trunk Western Lines Rd. (U.S.R.A.), Grand Rapids, Mich.; Mar. 1 to Aug. 2, 1920, Division Freight Agent, Western Lines, G.T.R., Grand Rapids, Mich.

Capt. L. C. Ord, formerly Assistant Works Manager, Angus Car Shops, Montreal, who served in France during the war with the 166th Sieg Battery, has entered the service of the Cammel-Laird Engineering Co.'s service in England.

Arthur Patriarche, Special Representative, Traffic Department, Pere Marquette Ry., Detroit, Mich., died there Aug. 16, after an illness lasting three months. A. P., as he was affectionately referred to by his associates, was born in Jersey, Channel Islands, June 13, 1849, and came to Canada with his parents in 1860, making the journey across the Atlantic in a sailing ship. He attended school at Belleville, Ont., and learned telegraphy there. He entered railway service with the G.T.R. at Hamilton, Ont., and in the closing years of the United States civil war was night operator for the G.T.R. there. He entered railway service in the U.S. in Sept., 1872, after which he was to 1875 with Flint and Pere Marquette Rd., Bay City, Mich.; Jan. 1875 to Sept. 1882, agent, same road, Bay City, Mich.; Sept. 1882 to Sept. 1883, General Western Agent, same road, Milwaukee, Wis.; Sept. 1883 to 1886, Assistant General Freight Agent, same road, Bay City, Mich.; 1886 to 1891, General Freight Agent, same road, Bay City, Mich.; 1891 to 1900, Traffic Manager, same road, Bay Cit, Mich.; 1900 to 1905, Traffic Manager, Pere Marquette Rd., Detroit, Mich.; 1905 to 1909, General Traffic Manager, same road, Detroit, Mich.; 1909 to 1912, Vice President (Traffic), same road, Detroit, Mich.; 1912 to 1918, Special Representative, Traffic Department, Pere Marquette Ry., Detroit, Mich.; 1918 to Mar. 1, 1920, Assistant to Federal Manager P.M. Rd., United States Railroad Administration, Detroit, Mich.; and from Mar. 1, 1920, Special Representative, Traffic Department, Pere Marquette Ry., Detroit, Mich. He was a man of wide reading and independent thought and was the first person to call attention to the dangers of peach orchards in Western Michigan which the Chicago Drainage Canal brought about. His memorandum on the subject was accepted as Michigan's brief

and was later adopted in Canada in the regulation of the water diversion, and it is stated as a significant fact that since the drainage canal project has been carried out a great number of peach orchards in the western part of Michigan have been destroyed by frosts. He was deeply interested in agriculture generally, and had served on many committees. The funeral took place at Roseland Cemetery, Detroit, Aug. 18, and was attended by a number of transportation men.

George Pepall, who has been appointed Assistant Foreign Freight Agent, Canadian National-Grand Trunk Rys., Toronto, was born at High Wycombe, Bucks, Eng., Jan. 15, 1849, and entered Canadian railway service Mar. 1880, since when he has been, to Feb. 1884, clerk, G.T.R. freight office, Toronto; Feb. 1884 to Apr. 1, 1898, chief clerk in charge of freight station, G.T.R., Yonge St., Toronto; Apr. 1, 1898, to July 15, 1910, Canadian Agent, National Despatch-Great Eastern Line, Toronto; July 15, 1910 to Aug. 1, 1920, Assistant Foreign Freight Agent, G.T.R., Toronto.

H. W. Ploss, who has been appointed General Agent, Freight Department, Canadian National-Grand Trunk Rys., Milwaukee, Wis., was born at Chicago, Ill., Feb. 23, 1873, and entered railway service in Aug. 1889, since when he has been, to Oct. 1891, clerk, G.T.R., Chicago, Ill.; 1891 to 1893, Soliciting Freight Agent, West Shore Line and Reading Despatch, Chicago, Ill.; Nov. 1, 1900 to July 1, 1909, Contracting Freight Agent, G.T.R., Milwaukee, Wis.; also from Mar. 19, 1906, to July 1, 1909, Agent, Reading Despatch, Milwaukee, Wis., and also acting as Agent of the Milwaukee and Michigan lines Grand Trunk Despatch and Northern Express lines; July 1, 1909 to Mar. 1, 1919, Commercial Agent, G.T.R., Milwaukee, Wis.; Mar. 1, 1919 to Mar. 1, 1920, General Agent, Freight Department, Grand Trunk Western Lines Rd. (U.S.R.A.), Milwaukee, Wis.; Mar. 1 to Aug. 2, 1920, Commercial Agent, G.T.R., Milwaukee, Wis. He was President of the Milwaukee Traffic Club, and was also for a number of years, Chairman of the Milwaukee Freight Committee until its dissolution, when the U.S. R.A. assumed control of the railways.

F. R. Porter, who has been appointed Foreign Freight Agent, Canadian National-Grand Trunk Rys., Toronto, was born at Stratford, Ont., June 13, 1875, and entered railway service Apr. 3, 1892, since when he has been, to May 1, 1896, clerk and stenographer, Assistant Superintendent's and Local Freight Agent's offices, G.T.R., Stratford and London, Ont.; May 1, 1896 to Jan. 31, 1898, clerk, Division Freight Agent's office, G.T.R., Stratford, Ont.; Jan. 31 to Nov. 30, 1898, stenographer, Division Freight Agent's office, G.T.R., Hamilton, Ont.; Nov. 30, 1898 to July 31, 1899, chief clerk to Division Freight Agent, G.T.R., Stratford, Ont.; July 31, 1899 to Feb. 28, 1901, chief clerk to Division Freight Agent, G.T.R., Hamilton, Ont.; Feb. 28, 1901, to July 31, 1902, Soliciting Freight Agent, G.T.R., Hamilton, Ont.; July 31 to Dec. 31, 1902, Travelling Freight Agent, G.T.R., Hamilton, Ont.; Jan. 1, 1903, to July 10, 1910, Assistant Foreign Freight Agent, G.T.R., Toronto; July 11, 1910, to July 14, 1913, Division Freight Agent, Grand Trunk Pacific Ry., Edmonton, Alta.; July 15, 1913 to July 1920, Assistant General Freight Agent, Grand Trunk Pacific Ry., Winnipeg.

W. D. Robb, Vice President, Transportation and Maintenance, G.T.R., Mont-

real, spent part of August with his family at Prout's Neck, Me.

Miss D. G. Rutherford, daughter of J. G. Rutherford, C.M.G., one of the Board of Railway Commissioners, was married Aug. 6 at Ottawa to Clive Rogers, of Addo, South Africa, where they will reside.

D. C. Shepard, who died at St. Paul, Minn., Aug. 7, aged 92, is stated to have been connected with the building of over 7,000 miles of railways as a railway contractor. As a member of the firm of Langdon & Shepard he was engaged in building about 700 miles of the C.P.R. between Oak Lake, Man., and Calgary, Alta., in 1882 and 1883.

T. Duff Smith, Fuel Agent, Grand Trunk Pacific Ry., Winnipeg, has been elected a member of the International Railway Fuel Association executive committee.

T. J. Smith, European Freight Manager, C.P.R., London, Eng., was in Canada recently, on a business trip.

Sir Alfred Smithers, Chairman, G.T.R., arrived in New York, Aug. 25, en route to Montreal, on G.T.R. business. While on the voyage, he was taken ill, and on arrival at New York was removed to St. Luke's hospital, suffering from abdominal trouble, which may detain him about two weeks. H. G. Kelley, President, G.T.R., met him at New York.

E. Tiffin, Special Traffic Representative, Canadian National Rys., is seriously ill at his house, at Preston, Ont.

John Millard Sparling, who has been appointed Assistant to Vice President (Traffic) G.T.R., Montreal, was born at Toronto, Feb. 16, 1882, and entered railway service May 1, 1899, since when he has been, to Apr. 30, 1900, freight clerk, National Despatch Line, Toronto; May 1, 1900 to Dec. 1903, freight clerk, Lehigh Valley Rd., Toronto; Dec. 3, 1903 to Oct. 31, 1905, freight clerk, Central Vermont Ry., St. Albans, Vt.; Nov. 1, 1905 to May 14, 1906, freight clerk, G.T.R., Montreal; May 15, 1906 to Feb 28, 1907, chief clerk to Division Freight Agent, G.T.R., Portland, Me.; Mar. 1, 1907 to Jan. 15, 1909, chief clerk, Freight Department, G.T.R., New York; Jan. 16, 1909, to Apr. 30, 1916, chief clerk, Freight Tariff Bureau, G.T.R., Montreal; May 1, 1916 to July 31, 1918, chief clerk to General Freight Agent, G.T.R., Montreal; Aug. 1, 1918 to May 31, 1919, chief clerk to Freight Traffic Manager, G.T.R., Montreal; June 1919 to July 31, 1920, chief clerk to Vice President (Traffic), G.T.R., Montreal.

W. H. Spicer, who has been appointed District Freight Agent, Canadian National-Grand Trunk Rys., Detroit, Mich., was born at Montreal, Sept. 29, 1871, and entered railway service Nov. 1, 1890, since when he has been to May 1, 1896, Travelling Car Agent, Western Lines, G.T.R., Detroit, Mich.; May 1 to July 1, 1896, Travelling Car Agent, G.T.R., Montreal; July 1, 1896 to Jan. 1, 1898, Travelling Car Agent, G.T.R., Portland, Me.; Jan. 1, 1898 to Mar. 1, 1910, Travelling Car Agent, G.T.R., Boston, Mass.; Mar. 1, 1901 to Apr. 1, 1902, Agent, National Despatch-Great Eastern Fast Freight Line, Battle Creek, Mich.; Apr. 1, 1902 to Mar. 2, 1905, chief clerk, General Freight Department Western Lines, G.T.R., Chicago, Ill.; Mar. 1, 1905 to July 1, 1909, Agent, Lackawanna-Grand Trunk Fast Freight Line, Milwaukee, Wis.; July 1, 1909 to Dec. 1, 1912, Commercial Agent, G.T.R., Detroit, Mich.; Dec. 1, 1912, to July 1, 1918, Division Freight Agent, G.T.R., Detroit, Mich.; July 1, 1918 to May 1, 1919, Division Freight Agent,

Grand Trunk Western Lines Rd. (U.S. R.A.); May 1, 1919 to Mar. 1, 1920, Assistant General Freight Agent, G.T.W. L.R. (U.S.R.A.), Detroit, Mich.; Mar. 1 to Aug. 2, 1920, Assistant General Freight Agent, Western Lines, G.T.R., Detroit, Mich.

H. G. Stanton, who died at Cornwall, Ont., Aug. 8, aged 65, was for some years engaged in railway work in Mexico, and later as engineer on the National Transcontinental Ry., resident engineer in Cape Breton on the St. Peters Canal, and latterly on the Ontario-St. Lawrence canals at Cornwall.

S. G. Wagstaff, whose appointment as Commercial Agent, Canadian National-Grand Trunk Rys., Toledo, Ohio, was announced in our last issue, was born at Hamilton, Ont., Jan. 9, 1866, and entered railway service in Oct., 1881, since when he has been, to Feb. 1887, in local freight office, Great Western Ry., now part of G.T.R., Niagara Falls, Ont.; Feb. 1887 to Feb. 1893, General Freight Agent Through Traffic, G.T.R., Detroit, Mich.; Feb. 1893 to July 1899, chief clerk, Commercial office, G.T.R., Detroit, Mich.; July 1899 to May, 1903, chief clerk, Division Freight Agent's office, G.T.R., Detroit, Mich.; May 1903 to Nov. 1903, Michigan State Agent, Reading Despatch Fast Freight Line, Detroit, Mich.; Dec. 1903 to July 1920, Commercial Agent, G.T.R., Toledo, Ohio.

Dr. T. Walker, District Medical Officer, Canadian National Rys., St. John, N.B., has resigned, after 30 years service with Canadian Government Railways.

A. E. Warren, General Manager, Western Lines, Canadian National Rys., Winnipeg, who has also been appointed General Manager, Grand Trunk Pacific Ry., was born at Taunton, Eng., June 9, 1874, and entered railway service in 1889, and served in various capacities in Car Service Department, Superintendent's, General Superintendent's and Manager's offices, and station and yard service, C.P.R., until July, 1901, when he resigned to enter mercantile business. He entered Canadian Northern Ry. service in Aug. 1902, and served as station agent, chief clerk to General Manager, Superintendent, General Superintendent and Assistant to General Manager, Western Lines. From Jan. 1 to Aug. 1, 1918, he was loaned to the Dominion Government and acted as Chief Operating Officer, Department of Railways and Canals, Ottawa. He was appointed General Manager, Western Lines, Canadian National Rys., in Nov. 1918.

Lady Whyte, of Winnipeg, widow of Sir William Whyte, formerly Vice President, C.P.R., is visiting her daughter, Mrs. C. F. Meech, in Vancouver, B.C.

G. Wilson, Superintendent, Locomotive Shops, G.T.R., Montreal, was presented with a chime clock by the staff, Aug. 5, on his marriage. The presentation was made by Sir Alexander Bertram, on behalf of the staff.

David Oliver Wood, who has been appointed General Foreign Freight Agent, Canadian National-Grand Trunk Rys., Montreal, was born at Kleinburg, Ont., Mar. 16, 1864, and entered transportation service in May 1883, since when he has been, to 1902, billing clerk, District Freight Agent's office, and Assistant Foreign Freight Agent, G.T.R., Toronto; 1902 to 1905, Western Freight Agent, Donaldson & Thomson Steamship Lines, Toronto; 1905 to 1917, General Freight Agent, Allan Line Steamships, Toronto; 1917 to Feb. 1919, Assistant Export and

Import Freight Agent, C.P.R., Toronto; April 1919 to Aug. 1, 1920, Traffic Manager, Export and Import Freight Department, Canadian National Rys., Toronto. From Sept. 1917 to Jan. 1, 1919, he was loaned to the British Ministry of Shipping (Canada), and acted as Assistant to the Director General, at Montreal.

Frederick George Wood, who has been appointed General Agent, Freight Department, Canadian National-Grand Trunk Rys., Pittsburg, Pa., was born at Toronto, Sept. 15, 1890, and entered railway service in 1906, since when he has been, to 1908, clerk, District Freight Agent's office, G.T.R., Toronto; 1908 to 1909, clerk, General Freight and Passenger Agent's office, Canadian Northern Ry., Toronto; 1909 to Aug. 1910, secretary to General Freight and Passenger Agent, C.N.R., Toronto; Aug. 1910 to Feb. 1911, chief clerk, District Freight Agent, G.T. Pacific Ry., Edmonton, Alta.; Feb. to Apr. 1911, secretary to General Traffic Manager, Canadian Northern Ry., Toronto; Apr. 1911 to June 1912, Contracting Freight Agent, C.N.R., Pittsburg, Pa.; June 1912 to Feb. 1914, Travelling Freight Agent, C.N.R., Pittsburg, Pa.; Feb. 1914 to Mar. 1916, Commercial Agent, Canadian Northern Ry., St. Louis, Mo.; Mar. 1916 to July 1920, General Agent, C.N.R., Pittsburg, Pa.

John Anderson Wright, who has been appointed Assistant Foreign Freight Agent, Canadian National-Grand Trunk Rys., Montreal, was born at Peterborough, Ont., Oct. 27, 1881, and entered G.T.R. service May 1, 1899, since when he has been, to Dec. 31, 1899, junior clerk, General Freight Office; Jan. 1, 1900, to Jan. 1, 1903, clerk, same office; Jan. 1, 1903 to Sept. 22, 1904, stenographer, Foreign Freight Agent's office;

Sept. 23, 1904 to July 31, 1907, stenographer, General Freight Agent's office; Aug. 1, 1907 to May 31, 1915, clerk, Foreign Freight Office; June 1, 1915, to Mar. 31, 1917, chief clerk, same office; Mar. 1, 1917, to Apr. 25, 1920, Grain Agent, Foreign Freight office; Apr. 25 to Aug. 1, 1920, Assistant Foreign Freight Agent, G.T.R., all at Montreal.

C.P.R.'s McGill University Scholarship.—The scholarship at McGill University, Montreal, offered by the C.P.R. for competition among its employes, has been won by S. D. Rudenks, a messenger in the company's commercial telegraph department, Montreal. The scholarship covers the regular four years work at the University, the winner having the choice of several courses.

Gulf Paper Co.—A press report states that the Northcliffe newspaper interests of London, Eng., have acquired a two-thirds share in the Gulf Paper Co., at Clarke City, Que., owned by members of the Clarke family. The Clarke interests developed extensive properties on the north shore of the St. Lawrence River below Quebec, building Clarke City, with wharves, etc., and a railway to its power development plant.

Bluebird Transit Co. has been incorporated under the Ontario Companies Act with authorized capital of \$40,000 and office at Toronto, to buy, sell and operate for hire, etc., conveyances and vehicles capable of being moved by any form of power for the transportation of animate or inanimate objects by land, water or air, and for other purposes in connection with the same. The provisional directors are F. J. Hughes, D. P. J. Kelly and L. J. Phelan, solicitors, Toronto.

### Grain in Store at Elevators.

Grain in store at public terminal elevators, interior terminal elevators, country elevators in Western Division, and public elevators in east, also at U.S. Atlantic seaboard ports. Prepared by the Dominion Bureau of Statistics, Internal Trade Division.

Week ended Aug. 6th, 1920:	Wheat. Bush.	Oats. Bush.	Barley. Bush.	Flax. Bush.	Rye. Bush.	Totals. Bush.
Fort William						
C.P.R.	39,187	11,029	12,944	.....	8,961	72,121
Empire Elevator Co.	*1,910	*4,082	*1,525	1,007	436	*6,074
Consolidated Elevator Co.	201,399	55,313	28,836	103,379	2,286	391,163
Ogilvie Flour Mills Co.	186,900	33,928	53,591	.....	6,438	280,857
Western Terminal Elevator Co.	50,590	8,147	2,088	43,932	.....	104,757
G. T. Pacific	93,142	34,540	9,831	42,020	2,884	182,417
Grain Growers' Grain Co.	72,021	54,033	23,342	.....	1,569	150,965
Fort William Elevator Co.	99,971	95,890	28,059	16,431	6,923	247,274
Northwestern Elevator Co.	255,471	129,044	17,959	43	2,226	404,743
Port Arthur—						
Port Arthur Elevator Co.	156,439	64,401	22,859	6,820	4,748	255,267
Sask. Co-op. Elevator Co.	167,465	30,820	24,262	145,540	1,857	369,944
Canadian Government Elevator	887,559	45,381	18,740	124,188	8,003	1,083,871
Thunder Bay	30,434	.....	*7,538	677	80	23,653
Davidson and Smith	10,442	8,596	2,045	.....	423	21,506
Eastern-Richardson	86,317	36,743	12,355	17,527	*121	152,821
Total Public Terminal Elevators ...	2,335,427	608,783	247,848	501,564	46,663	3,735,285
Total Private Terminal Elevators	279,718	115,599	34,771	82	.....	430,170
Saskatoon: Can. Gov't Elevator	215,437	6,200	.....	20,307	.....	241,944
Moose Jaw: Can. Gov't Elevator	267,313	15,093	1,503	20,075	.....	303,984
Calgary: Can. Gov't Elevator	273,437	149,225	12,159	67	991	435,879
Vancouver, B.C.: Can. Gov't Elevator	7,591	1,765	.....	.....	.....	9,356
*Total Interior Terminal Elevators ..	763,778	172,283	13,662	40,449	991	991,163
Midland—						
Aberdeen Elevator Co.	14,100	.....	7,724	.....	.....	21,824
Midland Elevator Co.	30,020	1,651	.....	.....	.....	31,671
Tiffin, G.T.P.	101,836	8,000	.....	.....	.....	109,836
Port McNicoll	622,949	1,732	202,665	.....	.....	827,346
Goderich—						
Elevator and Transit Co.	460,768	79,819	6,217	.....	.....	546,804
West Can. Flour Mills Co., Ltd.	93,098	.....	.....	.....	.....	93,098
Toronto: Campbell Flour Mills Co.	18,664	9,934	3,017	.....	.....	31,615
Kingston—						
*Commercial Elevator Co.	.....	5	.....	.....	.....	5
*Maple Leaf Milling Co., Ltd.	93,796	.....	.....	.....	.....	93,796
Montreal—						
Harbor Commissioners No. 1 and 2	910,965	122,224	264,609	.....	549	1,298,347
Montreal Warehousing Co.	221,860	8,828	53,215	23,356	.....	307,259
Ogilvie Flour Mills Co.	303,692	.....	.....	.....	.....	303,692
Total Public Elevators	2,871,748	232,193	537,447	23,356	549	3,665,293
*Total Country Elevators	774,113	1,022,139	238,672	79,507	.....	2,114,431
Total Quantity in Store	7,024,784	2,145,997	1,072,400	644,958	48,203	10,936,342
*Week ended July 30th, 1920.						

## Railway Rolling Stock Orders and Deliveries.

Algoma Eastern Ry. is reported to have ordered 2 locomotives from Montreal Locomotive Works.

Canadian National Rys. have ordered 2 business cars from Canadian Car & Foundry Co. for immediate delivery.

The Timiskaming & Northern Ontario Ry. advised us recently that it would be in the market for four Pacific type locomotives.

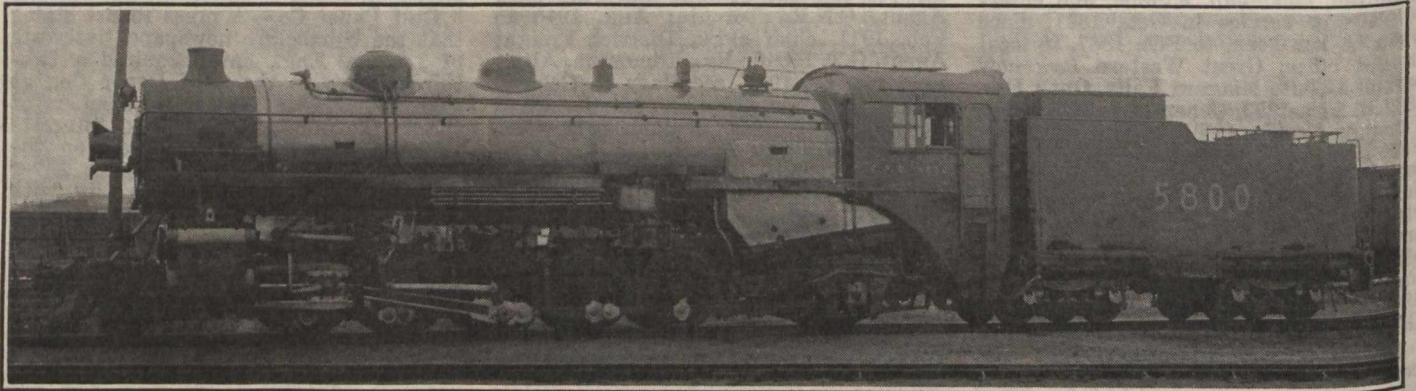
The C.P.R., between July 14 and Aug. 14, ordered 11 snow flangers and 8 single track steel snow ploughs from its Angus shops, Montreal.

out of an order for 350, placed this year with Hart-Otis Car Co.; 34 cabooses, out of an order for 80, placed this year with Canadian Car & Foundry Co.; 10 heavy and 32 medium Pacific type locomotives, completing an order placed this year with Montreal Locomotive Works, and 12 switching locomotives, out of an order for 30, placed this year with Canadian Locomotive Co.

The C.P.R. has received 5 Santa Fe (2-10-2) locomotives, an illustration of one of which is given on this page, from its Angus shops, and which were order-

ing of one of which is given on this page, completing orders for these types placed with Montreal Locomotive Works in February. There are also on order with the same company, 12 light locomotives of the same type. Following are the chief details of the medium and heavy locomotives, those for the light locomotive being the same as the heavy, except that they are equipped with Young valve gear:—

	Medium.	Heavy.
Weight on drivers.....	166,000 lb.	175,000 lb.
Weight on truck .....	50,000 lb.	49,000 lb.
Weight on trailer .....	50,000 lb.	49,000 lb.
Weight, total .....	266,000 lb.	273,000 lb.
Wheel base, driving .....	13 ft.	13 ft.



Santa Fe (2-10-2) Locomotive, Canadian Pacific Railway.

The C.P.R., between July 14 and Aug. 14, received 2 vans and 1 Pacific type locomotive from its Angus shops, Montreal, and 6 vans from its Winnipeg shops.

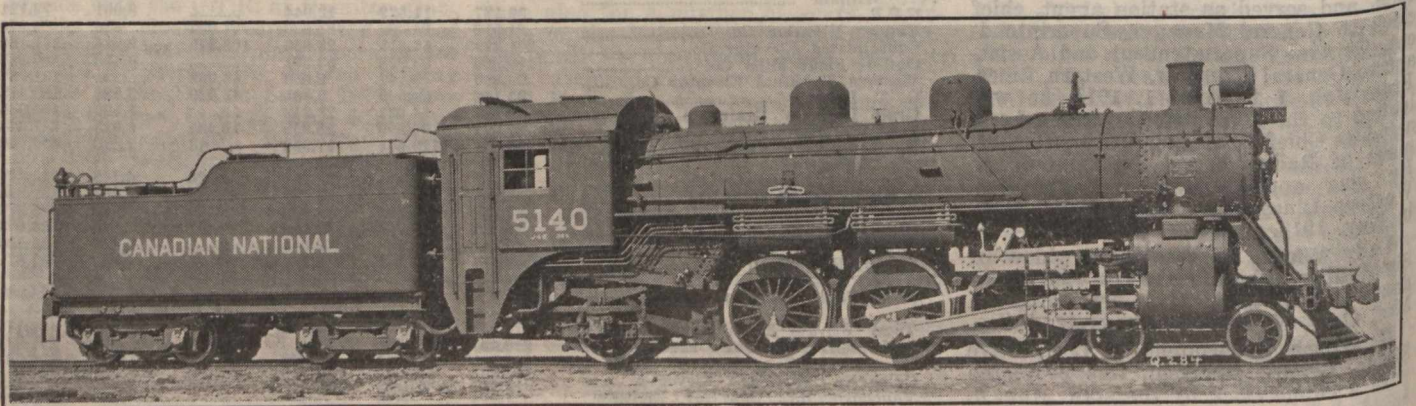
Canadian Car & Foundry Co. is reported to have orders on its books totaling \$30,000,000, but is said to be hampered somewhat by shortage of material, consequent upon transportation difficulties.

Canadian Car & Foundry Co., between July 12 and Aug. 12, made the following deliveries: 67 Hart-Otis ballast cars, 38

ed in February. These locomotives are fitted with double draw bars between engine and tender, and Vaughan trailing truck. They have cast steel frame and C.P.R. standard vestibule cab, and are equipped to burn coal or oil fuel. Following are the chief details:—

Weight on engine truck .....	24,000 lb.
Weight on trailing truck .....	55,000 lb.
Weight on drivers .....	275,600 lb.
Weight of engine, total .....	354,600 lb.
Weight of tender, loaded .....	180,000 lb.
Coal capacity .....	12 tons
Water capacity .....	8,000 imp. gal.
Driving wheel, diar. ....	58 in.

Wheel base, engine and tender.....	66 ft. 5 1/2 in.	66 ft. 6 3/4 in.
Cylinders, diar. and stroke.....	23 1/2 x 28	24 x 28
Cylinders, spread.....	10 ft. 3 3/4 in.	10 ft. 4 in.
Driving wheel, diar.....	69 in.	69 in.
Driving wheel centers.....	62 in.	62 in.
Driving wheel centers material.....	Cast steel	Cast steel
Driving journals, Main.....	10 1/2 x 21	10 1/2 x 21
Others.....	10 x 13	10 x 13
Trailer wheel, diar.....	48 in.	48 in.
Driving wheel journals....	9 x 14	9 x 14
Engine truck wheels.....	33 in.	33 in.
Engine truck wheel journals.....	6 1/2 x 12	6 1/2 x 12
Frames, width.....	5 in.	5 in.



Pacific Type (4-6-2) Locomotive, Canadian National Railways.

cabooses and 12 observation cars to Canadian National Rys.; 50 tram cars to Canadian Creosoting Co.; 3 dump cars to Greater Winnipeg Water District Ry.; 3 cabooses to Pacific Great Eastern Ry.; 94 tank cars to Imperial Oil Ltd.; 101 repaired hopper cars to G.T.R., and 117 repaired box cars to Grand Trunk Pacific Ry.

Canadian National Rys., to Aug. 11, received 11 observation buffet compartment sleeping cars, out of an order for 13, placed in 1919, with Canadian Car & Foundry Co.; 228 general service cars, out of an order for 1,150, placed this year with Eastern Car Co.; 48 ballast cars,

Cylinders, diar. and stroke .....	26 1/4 x 32 in.
Firebox .....	120 1/4 x 88 3/4
Grate area .....	74.2 sq. ft.
Tubes, no. and diar. ....	230 2 1/4, 45 5 1/2 in.
Tubes, length over sheets .....	21 ft.
Heating surface, firebox .....	332.5 sq. ft.
Heating surface, arch tubes .....	37.5 sq. ft.
Heating surface, tubes .....	4,200 sq. ft.
Superheating surface, approximate....	1,085 sq. ft.
Total equivalent heating surface .....	6,197 sq. ft.
Boiler pressure .....	200 lb.
Factor of adhesion .....	4.16
Superheater .....	Locomotive Superheater Co., type A
Reverse gear .....	Franklin Railway Supply Co. Ragonnet
Driving boxes, main .....	Cole
Fire doors .....	automatic

Canadian National Rys., to Aug. 11, received 10 heavy and 32 medium Pacific type (4-6-2) locomotives, an illustration

Boiler, type.....	Straight top radial stay	Extended wagon top radial stay
Boiler, diar. inside first ring .....	71 5/8	72 1/2
Boiler pressure.....	200 lb.	200 lb.
Firebox, length and width .....	108 x 75 1/4	108 1/2 x 75 1/4
Tubes, no. and diar.....	182 2 in.	228 2 in.
.....	28 5 3/8 in.	32 5 3/8 in.
Heating surface tubes.....	1,945 sq. ft.	2,378 sq. ft.
Heating surface, flues.....	804 sq. ft.	897 sq. ft.
Heating surface, f.b. tubes.....	27 sq. ft.	27 sq. ft.
Heating surface, fire box .....	188 sq. ft.	215 sq. ft.
Heating surface, total.....	2,964 sq. ft.	3,517 sq. ft.
Superheating, surface.....	677 sq. ft.	757.3 sq. ft.
Grate area.....	56.4 sq. ft.	56.5 sq. ft.
Tractive power.....	38,100	39,700
Factor of adhesion.....	4.36	4.4
Superheater.....	Hungerford - Cameron	Schmidt

Center of boiler from rail.....	9 ft. 5 in. Screw	9 ft. 8 in. Screw
Reverse gear.....	Vestibule C.N.R.	Vestibule C.N.R.
Cab top.....	standard 10 and 13 in. channels	standard 10 and 13 in. channels
Tender frame.....	Equalized 6 x 11	Equalized 6 x 11
Tender, wheel diar.....	Water bottom	Water bottom
Tender, truck type.....	6,500 imp. gal.	9,000 U.S. gal.
Tender journals.....	10 tons	10 tons
Tank type.....	Locomotive Stoker	
Water capacity.....		
Coal capacity.....		
Coal pusher.....		

The Pacific Great Eastern Ry. has received one Mikado (2-8-2) type locomotive, out of an order for 3 placed in February with Canadian Locomotive Co. Following are the chief details:—

Fuel used.....	Oil
Weight on drivers.....	162,000 lb.
Weight of engine, total.....	212,000 lb.
Wheel base of engine, rigid.....	13 ft. 6 in.
Wheel base of engine, total.....	30 ft. 9 in.
Wheel base of engine and tender.....	61 ft. 3 in.
Heating surface, fire box and arch tubes.....	179 sq. ft.
Heating surface, tubes.....	2,244 sq. ft.
Heating surface, total.....	2,423 sq. ft.
Driving wheels, diar.....	51 in.
Driving wheel, centers.....	Cast steel
Driving journals, diar and length.....	9½ and 9 x 12
Cylinders, diar, and stroke.....	22 x 28 in.
Boiler, type.....	Extended wagon top, radial stayed
Boiler pressure.....	190 lb.
Tubes, number and diar.....	24—5⅞; 189—2 in.
Tubes, length.....	17 ft.
Injectors.....	Nathan No. 9
Safety valves.....	3 in. Lunkenheimer
Air brakes.....	Westinghouse American
Packing.....	King, metallic
Superheater.....	Locomotive Superheater Co., type A
Frame cradle.....	Commonwealth
Trailing truck.....	Delta
Valve motion.....	Walschaert
Headlight.....	Electric
Weight of tender loaded.....	153,500 lb.
Tank capacity, oil.....	2,700 imp. galls.
Tank capacity, water.....	6,000 imp. galls.
Tank, type.....	Water bottom
Truck, type.....	Equalized
Wheel diar.....	33 in.
Wheel type.....	Steel tired
Journal diar, and length.....	5½ x 10 in.
Brakebeam.....	Safety simplex

**Furnishing of Equipment for Loading on Lines Performing Switching Service.**

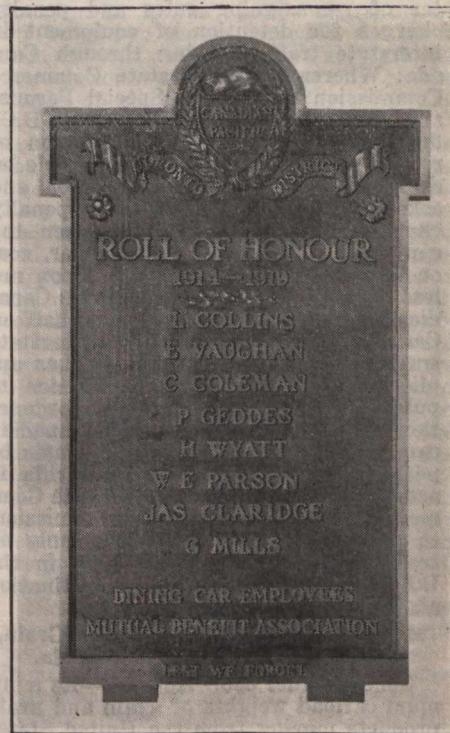
The Railway Association of Canada has issued the following circular:—As the present code of Car Service Rules, A.R.A., does not specifically deal with the furnishing of equipment for loading on lines performing switching service, it is recommended that the following rules govern the practice on Canadian lines in this respect:

1. (a) When cars are to be loaded to destinations within the same switching limits in which the shipment originates, the obligation of supplying equipment ordered rests with the road upon which the car is to be loaded.
- (b) When cars are to be loaded on a switching line to destinations beyond the switching limits, primary obligation for equipment ordered rests with the carrier road which is to receive the loaded car for road haul, subject to paragraph 2.
2. A road haul line or terminal switching line loading cars in switching service destined to points beyond the switching limits on a carrier road shall furnish the equipment from such supply as may be available on its rails, and, when equipment required is not available, will call upon the carrier road to furnish necessary cars under paragraph 1 (b).
3. The use of equipment as above is subject to Car Service Rules.
4. Shippers will be required to place order for equipment desired with proper representatives of the road on which cars are to be loaded.

**C.P.R. Dining Car Department's War Memorial.**

The C.P.R. Dining Car Department's Mutual Benefit Association has erected a bronze roll of honor table in the office of the Superintendent of the department at Toronto, room 110 Union Station, in honor of eight of the department's employees who were killed in the war. The tablet was unveiled by W. A. Cooper, Manager, Sleeping, Dining and Parlor Cars and News Service, C.P.R., Montreal, July 31. It bears the names of the following employes:—

- L. Collings, chef, 75th Battalion, killed at Vimy Ridge.
- G. Mills, cook, 58th Battalion, killed at Vimy Ridge.
- W. E. Parsons, cook, 15th Battalion.
- C. Coleman, steward, 18th Battalion, killed a few days before the signing of the armistice.
- E. Vaughan, waiter, 170th Battalion, died of wounds in England.
- P. Geddes, waiter, 15th Battalion, who was last seen when giving his lifebelt to



a nursing sister on board a hospital ship which went down in the English Channel.

- H. Wyatt, waiter, 3rd Battalion, killed at St. Julien (first battle).
- Jas. Claridge, waiter, 3rd Machine Gun Section.

In unveiling the tablet Mr. Cooper said that out of the 10,000 odd C.P.R. men who enlisted during the war, there were about 1,100 from the dining car department.

**Car Shortage.**—The U.S. Commission for Car Service reports that the car shortage on U.S. and Canadian railways increased slightly during the week of Aug. 1, when the supply was 132,370 cars less than the demand, compared with a shortage of 125,000 cars during the previous week.

The Swedish Parliament is reported to have approved the electrification of the state railways between Stockholm and Goteberg, and to have appropriated 23,000,000 krone (normally \$1,164,000). It is expected that the work will be completed by 1925.

**Prepayment of Freight Charges From the U.S. to Canada Suspended.**

The Interstate Commerce Commission issued the following order at Washington Aug. 17:—It appearing that there have been filed with the Interstate Commerce Commission by F. A. Leland and W. J. Kelly, agents, tariffs containing schedules stating new individual and joint rates and charges and new individual and joint regulations and practices affecting such rates and charges, to become effective, except as otherwise noted herein, on Aug. 18, designated as follows: F. A. Leland, Agent—Supplement 13 to I.C.C. 1316; supplement 14 to I.C.C. 1316, effective Sept. 16; W. J. Kelly, agent—Supplement 13 to I.C.C. 917; Supplement 14 to I.C.C. 917, effective Sept. 16.

It is ordered that the Commission, upon complaint, without formal pleading, enter upon a hearing concerning the lawfulness of the rates, charges, regulations and practices stated in the said schedules contained in said tariffs, viz.: F. A. Leland, agent—Supplement 13 to I.C.C. 1316 on page 7 thereof, item 290; supplement 14 to I.C.C. 1316 on page 8 thereof, item 290; W. J. Kelly, agent—Supplement 13 to I.C.C. 917 on page 7 thereof, item 290; supplement 14 to I.C.C. 917 on page 8 thereof, item 290.

It further appearing, that said schedules provide certain rules and regulations requiring the prepayment of freight charges on traffic from points in the United States to points in Canada, and the rights and interests of the public appearing to be injuriously affected thereby, and it being the opinion of the Commission that the effective date of the said schedules contained in said tariffs should be postponed pending said hearing and decision thereon; it is further ordered, that the operation of the said schedules contained in said tariffs be suspended, and that the use of the rates, charges, regulations and practices therein stated be deferred upon interstate traffic until Dec. 16, unless otherwise ordered by the Commission, and no change shall be made in such rates, charges, regulations and practices during the said period of suspension unless authorized by special permission of the Commission. It is further ordered, that the rates and charges thereby sought to be changed shall not be increased, and the regulations and practices thereby sought to be altered, shall not be changed by any subsequent tariff or schedule, until this investigation and suspension proceeding has been disposed of, or until the period of suspension and any extension thereof has expired, unless authorized by special permission of the Commission. And it is further ordered, that a copy of this order be filed with said schedules in the office of the Interstate Commerce Commission, and that copies hereof be forthwith served upon the carriers parties to said schedules, and upon agents F. A. Leland and W. J. Kelly, and that said carriers parties to said schedules be made respondents to this proceeding, and that they be duly notified of the time and place of the hearing above ordered.

**The Wrong Train.**—"Why didn't you put my luggage in as I asked you?" angrily demanded a passenger of a porter as his train was moving off. "I did," shouted back the porter; "yer luggage has more sense than yerself. Ye're in t' wrong train."

## Traffic Orders by Board of Railway Commissioners.

### Exportation of Coal Partly Prohibited.

General order 301. July 22.—In the matter of the question of coal supply in Canada, and the powers conferred upon the Board by chap. 66 of the acts of the Parliament of Canada, 1920: Upon its appearing to the Board that there is a real or apprehended scarcity of coal, with a view to conserving the supply, and in pursuance of the powers conferred by the said act, the Board doth order that the exportation of coal from the Atlantic, St. Lawrence River and Gulf ports of Canada, except to the United States or to Newfoundland, unless otherwise permitted, and in accordance with regulations to be promulgated by the Board, be prohibited on and after Aug. 1, 1920.

### Joint Through Rates from the U.S. to Canada.

General order 303. Aug. 13.—Re international railway rates, fares and charges, as affected by Interstate Commerce Commission's order, July 29th, 1920, ex parte 74: Whereas the Interstate Commerce Commission, by its order dated at Washington, D.C., July 29, has granted carriers operating in the United States certain increases in their rates, fares and charges, as set out in the report of the said Commission, made part of its order, and the said increases being thereby made applicable also to the proportions of joint through rates to or from Canada, accruing within the United States, all of which may be made effective upon not less than five days notice; and whereas it is deemed by the Board to be expedient in the public interest that the continuity of joint through rates from points in the U.S. to points in Canada, and vice versa, should be preserved. Therefore, in pursuance of the powers conferred upon the Board by sec. 324 of the Railway Act, 1919, and of all other powers possessed by the Board in that behalf, it is ordered

That the proportions of through rates, fares and charges between the U.S. and Canada, fares in both directions, in effect at the date of this order, accruing within Canada, may, by general or blanket supplement to existing tariffs, be increased to the extent that the through rates, fares and charges shall conform to the increases authorized by the Interstate Commerce Commission's said order; except on coal and coke, increases on which are reserved pending the judgment of the Board in the application of Canadian carriers for increased rates within Canada.

2. That the through rates and fares from points in Canada to points in the U.S., so increased, may be published and filed to become effective on or after Aug. 26, upon not less than five days notice.

### Special Freight Tariffs to Atlantic Ports for Export.

General order 304. Aug. 19.—Re special tariffs on freight traffic to Montreal, Quebec, St. John, West St. John, and Halifax, for export: Whereas the rates and charges on freight traffic from United States shipping points to U.S. Atlantic ports will be increased on Aug. 26, by authority of an order of the Interstate Commerce Commission, dated July 29; and the Board, by its general order 303, dated Aug. 13, 1920, has authorized increases in the freight rates and charges from Canada to the U.S. in conformity with the said Interstate Commerce Com-

mission's order; and whereas it is expedient in the public interest that the relationship between the rates and charges from Canadian shipping points on freight traffic to the ports of Montreal, Quebec, St. John, West St. John, and Halifax, for export, and those to U. S. Atlantic ports be continued: Therefore, in pursuance of the powers conferred upon the Board by sec. 325 of the Railway Act, 1919, and of all other powers possessed by the Board in that behalf, it is ordered that the said rates and charges on export freight traffic from Canadian shipping points to Montreal, Quebec, St. John, West St. John, and Halifax may be increased in conformity with the said relationship, to become effective on or after Aug. 26, on not less than five days notice.

### Interstate Freight Traffic Passing Through Canada.

General order 305. Aug. 19.—Re matter of reconsigning rules and penalty charges for detention of equipment in interstate traffic passing through Canada: Whereas the Interstate Commerce Commission has, by its Special Permission 50,321, dated at Washington, D.C., July 31, authorized the publication of revised reconsigning rules, applicable on all freight in open top cars, and coal and coke in all cars, and emergency penalty charges for detention to all open top cars, and cars loaded with lumber, coal or coke, to be made effective upon not less than five days notice; and the Canadian Freight Association, in behalf of Canadian carriers engaged in interstate traffic passing through Canada, has applied to the Board for permission to publish and file tariffs in accordance therewith, it is ordered that Canadian carriers of the said interstate traffic be permitted to publish and file tariffs in accordance with the said Interstate Commerce Commission's Special Permission, to apply, at points in Canada, only on traffic en route from any point in the U.S. through Canada to any destination also in the U.S.

### Minimum Carload Weights on Grain, Etc., from the U.S. to Canada.

General order 306. Aug. 27.—Re minimum carload weights of grain and grain products moving from the United States into Canada, and rules and regulations applicable thereto: Whereas the Interstate Commerce Commission has, by its special permission 50450, dated at Washington, D.C., Aug. 21, as amended, authorized the publication and filing, on one days notice, of special supplements to the tariffs of U.S. carriers establishing increased minimum weights on grain and grain products, in carloads, and rules and regulations applicable thereto, renewing and extending from Sept. 1 to Dec. 31, the said tariffs which would otherwise expire Aug. 31, in accordance with the Interstate Commerce Commission's special permission 49801, Mar. 17, 1920, and the Board's special authority 123, Mar. 29, it is ordered that the said special permission 50450, as amended, be approved with respect to the said traffic moving from points in the U.S. to destinations in Canada.

### Interswitching at Cornwall.

29,930. July 30.—Re proposed cancellation by the Canadian Pacific and Grand Trunk Rys. and New York Central Rd. of the existing interswitching arrangements with the Cornwall St. Ry., Light

& Power Co. at Cornwall, Ont., to take effect Aug. 2: In pursuance of the powers conferred upon the Board by sec. 325 of the Railway Act, 1919, and of all other powers possessed by it in that behalf, the Board orders that those portions of the undermentioned schedules which would, on Aug. 2, 1920, abrogate the existing interswitching arrangements with the Cornwall St. Ry., Light & Power Co. be suspended until further order of the Board, viz., C.P.R. Supplement 6 to C.R.C. no. E-3668, G.T.R. Supplement 5 to C.R.C. no. E-4075, New York Central Rd. C.R.C., N.Y.C. 2139.

### Demurrage on U.S. Government Cars at Drummondville.

J. Hardwell, Chief Traffic Officer, Board of Railway Commissioners, made the following report to the Board on July 9 in the case of the United States Ordnance District Salvage Board vs. Canadian Car Demurrage Bureau:—This is an application of the United States Ordnance District Salvage Board, New York, for relief from demurrage amounting to \$7,535, which accrued at Drummondville, Que., during May and June, 1918, on 74 tank cars of U.S. Government ownership, sent in over the C.P.R. for the purpose of removing a large quantity of acid stored on U.S. Government account in the Aetna Explosives Co.'s plant, the removal having been necessitated by a change in the ownership of the plant. An error of \$10 is disclosed in the case of one car, 387, which reduces the amount to \$7,525, which total includes a deduction already made of \$410 to "bunching" in transit to Drummondville.

Adverting to the contention of the C.P.R. that had the cars not been consigned and waybilled to Drummondville they would not have been accepted from the U.S. carrier; the reason for the requirement in the Car Service Rules of the American Railroad Association (adopted by the Canadian railways) that empty tank cars be accompanied by waybills is that these cars are subject to reconsignment from point to point, instead of to the usual rule of returning direct to the home road or owner. For example, a private refrigerator car loaded with meat at Chicago for Montreal is returned empty to Chicago—the owner desires no other disposition, in fact he demands prompt return; but a private tank car loaded at Chicago may, when emptied at Montreal, be reconsigned empty to New York or any other U.S. point; hence the need of the waybill which is not required for the refrigerator car. But the tank car waybill is merely an operating detail—it carries no charges, while the ordinary waybill is a bill of charges due from the consignee, unless shown prepaid, and is not essential to the routing of the car for which other means could be available. The company's argument would, however, take the tank out of the ordinary empty car category and make it a consignment; in other words, the empty would be treated as if loaded and subject to demurrage at destination. If the cars had been refused at Adirondack Jct., the no-waybill technicality could have been the only reason, for the cars would be carded to Drummondville and the C.P.R. would be alive to the fact of the large volume of traffic waiting for them at that place, and it is not pretended that the company was in a position to supply tanks of its own.

Over and over again the railways, including the C.P.R., have said that in the interest of the public and their own it is the cars they want and not demurrage, and hence the plea for higher demurrage tolls, and that the ideal situation would exist in prompt release of cars and no demurrage. Here, however, was a case where the cars were not wanted elsewhere by the railway or by any other shipper, and yet the full scale of penalty tolls is insisted upon. In my opinion the old blanket toll of \$1 a day should be sufficient compensation for the use of the tracks at Drummondville, and I would include the 33 cars which the Car Demurrage Bureau reports were delayed the entire period on the Aetna Co.'s own tracks, having regard to applicants' admission that the cars were sent to Drummondville in numbers exceeding the shippers' facilities for loading. I would, however, authorize the exaction of the full schedule on the 10 cars, which, according to the Bureau, were not required, and were sent back empty, and on which, therefore, the C.P.R. received no revenue; this in line with the Board's ruling in the Proctor & Gamble case at Vancouver. This recommendation would reduce the bill from \$7,525 to \$3,359, assuming the figures given me by Mr. Colvin's office to be correct.

The Board adopted the report of the Chief Traffic Officer as its judgment.

#### Demurrage on Private Sidings.

On the application of the Canadian Manufacturers' Association on behalf of F. R. Stewart & Co., Vancouver, B.C., for a ruling that a consignee who has more than one private siding, or who may require alternative public team track delivery, is entitled under the Canadian Car Demurrage Rules to notification of arrival and to the 24 hours free time allowance of rule 3 to give orders for special placement, the Board gave the following ruling July 27:—

Rule (a) makes provision for 24 hours free of demurrage for various purposes, including the giving of orders for special placement by consignees not served by private sidings or industrial interchange tracks; hence a consignee served by a private siding is except from the 24-hour allowance, but is entitled to it in connection with the second movement if a car which would be customarily placed at a private siding is desired elsewhere, either at another private siding or at a public team track.

#### Rule on Automobile Tire Chains.

In the case of the American Audit Co., Spokane, Wash., vs. Canadian Freight Association, which was heard at Ottawa, May 18, J. Hardwell, Chief Traffic Officer, Board of Railway Commissioners, made the following report Aug. 3:—On June 29, 1918, a shipment weighing about 14,000 lb. was made from Victoria Park, Ont., to Vancouver, B.C., on which the 2nd class lake and rail rate of \$3.10 per 100 lb. was charged, under the following rating of Supplement 5, Nov. 1, 1915, to Canadian Freight Classification 16: "Chains: automobile tire, in boxes or barrels, l.c.l., 2nd class." Applicants describe the shipment as 28 barrels of auto chain. According to information furnished by the shippers, the Dominion Chain Co., to the Chairman of the Canadian Freight Association, it consisted of complete auto tire chains and a few extra parts for repairs.

The original application claimed the benefit of the following item 890 A of Supplement 3, effective Feb. 12, 1917, to Canadian Freight Association West-

bound Commodity Tariff C.R.C. No. E. 3174: "Chains, n.o.s., including link belting, \$1.62 per 100 lb." I interpret this description (the singular number will be noted) to refer to chain in the coil or mass; in other words, to material for re-fabrication into specific articles of utility. Apparently recognizing the force of the Association's answer that the item "does not apply on made-up chains of any description," claimants by subsequent letter, do not see how the application of another item can be disputed, viz., no. 760 of the tariff itself, reading under the general description of hardware: "Chains, halter, jack and safety, in barrels or boxes, l.c.l., \$1.86 per 100 lb." They say "automobile chains are safety chains, inasmuch as they are used for affording additional safety to automobile travelling when roads are wet and slippery." This, of course, is true; but it will probably be conceded that the attribute of safety is not peculiar to this particular article of chain.

It is a well known tariff principle that commodity descriptions are to be interpreted specifically. There can be no question as to the specific character of the other two chains named in the tariff item quoted; and as to the "safety," the Association contends that this is the "style of chain used for fastening the rubber plug to a basin or bath tub, laundry tub, etc.;" further, that "automobile chains have never been known to the trade as either jack chain or safety chain. They are known as automobile tire chains and are so described in all catalogues and literature." Enquiry I have made supports this contention. Tire chains are in tire-circumference lengths, with connecting cross pieces and hook attachments — made-up chains in every sense. They are put up in cotton bags with the words "Tire Chains" printed thereon, and my informant says are so known to the trade and car owners, the term "safety chain" not being used, except, possibly, loosely by the unacquainted. Two of the bags seen were from the same manufacturers as the shipment herein referred to, viz., the Dominion Chain Co., another, similarly marked, was from a factory at St. Catharines.

Not being provided with a commodity rate, the only alternative was the tariff rate under the classification as charged. It may be open to argument whether tire chains should not be given the same rate as the other specified makes, but the answer required of the Board relates to interpretation with a view to reparation, and not to an addition to the commodity tariff list.

This report has been adopted by the Board as its judgment.

#### Railway Finance, Meetings, Etc.

**Canadian National Rys.**—There have been deposited in the Department of State at Ottawa the following agreements relating to rolling stock:—Between the Canadian Northern Rolling Stock Ltd., the Canadian Northern Ry. Co., and the Gerard Trust Co., with reference to renumbering of equipment included in Canadian Northern Equipment Trust series 6, 1919, supplementary to an agreement of May 1, 1919; between the Canadian Rolling Stock Ltd., the Canadian Northern Ry. Co. and the Pennsylvania Co. for Insurance on Lives and Granting Annuities, with reference to renumbering of equipment included in Canadian Northern Equipment trust series A, 1918, supplementary to an agreement dated July 1, 1918; between

the last named three parties; similarly with respect to Canadian Northern Equipment Trust, series B, 1919, supplementary to an agreement dated Jan. 2, 1919; three agreements between the Imperial Rolling Stock Co., the Canadian Northern Ry. Co. and the Girard Trust Co., with reference to the renumbering of equipment included in Canadian Northern Equipment Trust, series F.I. 1913, series G.I., 1913, and series H.I., 1913, supplementary to agreements dated respectively, Mar. 1, Mar. 1, and Oct. 1, 1913; between the Imperial Rolling Stock Co., the Canadian Northern Ry. Co., and the Philadelphia Trust, Safe, Deposit & Insurance Co. with reference to renumbering of equipment included in Canadian Northern Equipment Trust, series C-1, 1912, supplementary to agreement dated April 1, 1912; two agreements between Imperial Rolling Stock Co., Canadian Northern Ry. Co., and Fidelity Trust Co., with respect to renumbering equipment included in Canadian Equipment Trust series K-I, 1914, L-I, 1916, supplementary to agreements dated Oct. 1, 1914, and Aug. 1, 1916.

**Canadian Pacific Ry.**—In notifying owners of C.P.R. shares deposited with the British Treasury, the Comptroller-General says:—"As the return of this security will necessitate 25,000 separate transfers and the preparation of about 150,000 certificates, it is expected that the C.P.R. Co. will require some time to carry the transactions through. It is, therefore, requested that those owners of the security who do not contemplate a change in their holding between now and Dec. 1 will return the enclosed form A completed at once, to ensure an early completion of the transfer. To those who contemplate dealing with the security, the Treasury, with the view of equalizing the pressure on the company, are willing, on receipt of the treasury certificate accompanied by the enclosed form A and the lodgment order B, to release the security as soon as possible. In this case the additional allowance would cease on the date of release. The Treasury take this opportunity of thanking holders who voluntarily placed their securities at the disposal of the government for the assistance thus rendered to the state."

**Canadian Pacific Ry.**—Dividends were declared Aug. 9 as follows, on common stock 2½% for quarter ended June 30, being at rate of 7% a year from revenue and 3% a year from special income account, payable Oct. 1 to shareholders of record Aug. 31; on preferred stock 2% for the half year ended June 30.

**Edmonton, Dunvegan & British Columbia Ry. Co.**—There has been deposited with the Secretary of State, Ottawa, an agreement, dated June 5, 1920, between the Edmonton, Dunvegan & British Columbia Ry. Co., and the Interior Truck Co., providing for the increase, from 5% to 6%, of the interest payable on the company's 20-year debenture stock, secured by the trust indenture dated Mar. 29, 1919.

**London's First Railway.**—A correspondent, writing about London, Ont., historically, says, among other things: "On Oct. 23, 1849, Col. Talbot turned the sod for the beginning of the Great Western Ry. Sir Allan MacNab, President of the railway, was present. At the evening banquet, Col. Talbot said that 55 years before he had slept on that very spot which he honored in the afternoon. The first train came to London on Dec. 15, 1853."

### Among the Express Companies.

The Interstate Commerce Commission gave judgment Aug. 11, on the application of the American Railway Ex. Co. for increases in class and commodity express rates, and in effect, found as follows:—The proposed increased class and commodity express rates, computed to represent an average increase of 25.16% of present rates, is found no justified on the record, but an increase of 12.5% of present rates is found justified, except that rates on milk and cream may be equalized with those contemporaneously applied by the railway lines between the same points; no adequate ground is disclosed to support the request of shippers for the exception of certain commodities from the application of the increased commodities from the application of the increased rates; a prescription of terminal to terminal rates, to apply in the absence of pick up and delivery service, or deductions from the published rates, where either service is not rendered, is not deemed warranted by the record; no warrant is found for requiring the establishment of carload commodity rates on rubber tires, inner tubes, or fabric, lower than the less than carload, or any quantity, rates, to apply where the shippers load and unload. In concluding, the judgment states that an application is pending for the authorization of the continuance of the consolidation of the express companies, and also for approval of a contract between the express company and railways over whose lines it operates, and it is ruled that nothing in the present judgment, as to rates, is to be taken as prejudicing or forecasting the decision in either of these cases, nor does the judgment take into consideration the award of the U.S. Railroad Labor Board, recommending increases in wages to the express employees, as to which the company has suggested the necessity for a further application or increased rates, after an analysis of the award.

#### Dominion Express Company.

D. F. Martin, formerly route agent at North Bay, has been transferred to Toronto.

E. Anderson has been appointed acting agent at Windsor, Ont., vice W. Aitchison, resigned.

J. Bayley, route agent, Eastern Division, spent his holiday by taking a trip out west to visit relatives.

Geo. Allen, of the Kingston staff, has been appointed agent at Kingston, Ont., vice F. W. Carr, transferred.

H. W. Cross, agent at Belleville, Ont., being ill with diphtheria, D. F. Martin, route agent, is looking after the office.

Geo. Padwich has been transferred from the Claims Department, Toronto, to the Superintendent's office, acting as correspondence clerk.

T. H. McGarrell, formerly agent at London, Ont., has been appointed acting route agent, vice O. A. Sharp, transferred.

N. J. Bauer, heretofore cashier at London, Ont., has been transferred to Windsor as cashier, vice H. F. Roode, appointed cashier at London.

W. J. Malcolm, formerly chief bill clerk at Toronto depot, has been appointed agent at Galt, Ont., vice E. Anderson, transferred.

J. H. Gallant, who entered the company's service as messenger Feb. 1, 1913,

has been appointed agent at Summerside, P.E.I., succeeding J. K. Mitchell.

G. S. Johns, formerly statement clerk at Toronto station, has been appointed acting route agent, with headquarters at North Bay, vice R. Murray, transferred.

R. Murray, who was appointed acting route agent at North Bay, Ont., is looking after the Niagara fruit district, with headquarters at Hamilton, Ont., and has W. F. McQueen as assistant.

O. A. Sharp, Route Agent, London, Ont., is in charge of the Leamington fruit district, with headquarters at Leamington, Ont., Mr. Chas. Stewart acting as assistant.

W. B. Knott, heretofore cashier at London, Ont., has been appointed acting agent there, vice T. H. McGarrell, transferred. He and his bride have just returned from a trip to California.

J. Barrett, formerly cashier at Ottawa, who has been appointed agent at Oshawa, Ont., vice M. R. Johnson, entered the service April 1, 1911, at Hamilton, and was transferred to Ottawa Jan. 11, 1915.

T. Kelly, who has been appointed Superintendent's accountant at Toronto, entered the service, Aug. 1, 1910, as stenographer and was appointed correspondence clerk in January, 1915. He enlisted for overseas on Aug. 16, 1915, and returned to his duties as correspondence clerk, Superintendent's office, in Jan., 1919.

### Telegraph, Telephone and Cable Matters.

E. N. Smith, President, Canadian Press Ltd., and D. Campbell, have been appointed on a board of conciliation, to represent employers and employees respectively, in the dispute between the Canadian Press Ltd. and its telegraph operators.

The litigation between the Postal Telegraph Cable Co. and the C.P.R. Telegraphs, which was instituted by the former company Mar. 12, in the U.S. District Court at New York, was discontinued by the court's order, Aug. 19, the plaintiff to pay the statutory costs, and to refund to the C.P.R. \$64,978.75, deposited in connection with the case. It is stated that the case was discontinued because the telegraph traffic balances have now shifted in favor of the C.P.R. and have more than offset the amount which was being sued for.

The Dominion Telegraph Co.'s annual meeting was held at Toronto recently. The balance sheet for the year ended June 30 shows assets of \$1,302,316.38, compared with \$1,306,329.42 for the previous year, and the liabilities of \$1,011,923.30, against \$1,013,351.25, the balance of profit and loss account being \$290,392.99, a decrease of \$585.18 from the previous year. The property is leased to the Western Union Telegraph Co. for 99 years from July 1, 1879, the 6% interest on the capital stock being guaranteed. The directors for the current year are:—Sir Henry Pellatt, President; Aemilius Jarvis, Vice President; E. Roper, Secretary-Treasurer; G. W. Aitkens, R. Clowry, E. Y. Gallagher, Sir James M. Gibson, and D. B. Hanna; the last named replacing Dr. C. O'Reilly, deceased.

The C.P.R. has made an agreement with its telegraph operators, on the lines

of the recent majority award of the conciliation board appointed to deal with the employees' demands for increased wages and improved working conditions. The board recommended that the Morse operators in the first three ratings at the larger offices, such as Hazel Hill, Halifax, N.S., St. John, N.B., Montreal, Ottawa, Toronto, Winnipeg, Moose Jaw, Calgary, and Vancouver, receive an all round increase of \$20 a month; other Morse operators to receive increases of about \$17 a month according to location. The employees on the Norkrum machines, chiefly females, each to receive increases of \$10 a month, and general clerks to receive increases ranging from \$5 to \$12 a month.

### Proposed British Cable Extensions.

At the Imperial Press Conference at Ottawa, in August, a resolution was adopted recommending that the various governments within the empire increase cable communications and decrease rates, and stating that it is essential that where any government assistance is given to the press by way of cable or other services, it should appear specifically in the public estimates. It was stated that in regard to cable facilities, the empire is really worse off than before the war, although a German owned cable line between Halifax, N.S., and England, is now in British hands. It was suggested that a British cable company be started to compete with the Great Eastern Cable Co. between Great Britain and points in Asia, Africa and India, and that a general cable rate of a penny (2c.) a word be adopted throughout the empire. Sir Roderick Jones, Managing Director of Reuter's Agency, while prepared to support the proposal, was not sanguine of its realization in the near future. The necessity for a better cable service was obvious, as cable traffic had increased enormously within the last few years.

### Cable Communication Between the West Indies.

The recent conference at Ottawa between members of the governments of Canada, the Bahamas Island, Barbados, Bermuda, British Guiana, British Honduras, Jamaica, the Leeward Islands, made the following declaration respecting cable communications, supplementary to the Canada-West Indies Trade Agreement, 1920, full particulars of which are given on page 516 of this issue:—With a view to the further promotion of the purposes of the Canada-West Indies Trade Agreement of even date the representatives of the governments of Canada and of the colonies named in the agreement will recommend for the favorable consideration of their respective governments that direct British owned and British controlled cables should be laid as soon as possible, without waiting for the termination of the agreement with the West Indian and Panama Telegraph Co., to connect Bermuda with Barbados, Trinidad, British Guiana, the Windward Islands, the Leeward Islands, and Turks Island or Jamaica. The Government of Canada will institute enquiries as soon as practicable as to the possibility of arranging for the laying of such cables and will communicate the results of these enquiries to the governments of the colonies.



# Electric Railway Department

## Investigation into Ontario Hydro-Electric Railway Projects.

The royal commission appointed by the Ontario Government to investigate the proposed hydro electric railways for Ontario held its first regular meeting in Toronto July 28, Mr. Justice Sutherland presiding. I. F. Hellmuth, K.C., appeared as investigating counsel appointed by the royal commission. The Hydro Electric Railway Association was represented by Robert McKay, K.C., and the Hydro Electric Power Commission by C. S. MacInnes, K.C. Mr. Hellmuth requested that the following information be supplied:—

1. A general map showing the districts to be served by the proposed hydro radial system or systems. This map to have indicated on it the proposed new radial railway lines, together with those railways already acquired or which it is intended to acquire from the Dominion Government. It is desirable that, if possible, this be on a scale not smaller than four miles to an inch.

2. Route maps of proposed new radial railways and those already acquired or which it is intended to acquire.

3. Profiles to accompany the foregoing route maps of the proposed new radial railways; on these it is desired that the nature of the proposed structures, such as bridges, culverts and railway intersections (other than grade) to be indicated.

4. Specifications, or a resume of same, indicating the nature of structures to be used (a) in the construction of the new radials proposed and (b) in the betterments or reconstruction proposed for those railways already acquired or which it is intended to acquire.

5. Estimates of preliminary engineering and miscellaneous overhead costs and of amounts for purchases of rights of way and other lands and roadbed features, etc., necessary to provide for the proposed new radial lines or necessary in connection with the railways intended to be acquired. These to be classified according to the several purposes and distributed according to the various divisions or sections of the proposed system.

6. Estimates of costs of construction itemized in detail for each division or section of (a) the proposed new radial railway lines and (b) the betterments or construction proposed for the railways already acquired or which it is intended to acquire. These details to include such items as weights of rail and other roadbed features and the several classes of overhead construction. It is desired that these estimates include schedules upon which they are based both in quantity and price.

7. Estimates of costs in detail of railway line transmission, telegraphs, telephones, signal systems and other accessories necessary to the proper operation of the lines.

8. General plans, specifications (resume) and detailed estimates of proposed stations and buildings other than terminal, according to the various classes, necessary for the operation of the railways.

9. General plans, specifications (resume) and detailed estimates of terminals, terminal stations, shops and other terminal buildings necessary for the operation of the railways.

10. General plans, specifications (re-

sume) and detailed estimates of costs of the receiving, transformer, switching and other electric stations and buildings required for the reception and application of the necessary electric power for the operation of the various divisions or sections of the railways.

11. General description and detailed estimates of electrical, mechanical and other equipment for the reception and application of the necessary electric power for the operation of the various divisions or sections of the railways (as intended to be contained in the receiving, transformer, switching or other stations). This also to comprise where necessary such transmission lines or connections thereto as are requisite for and

fund, taxes, car rentals and other like purposes be particularly specified.

14. An estimate of the amount of power required to be placed at the disposal of the proposed radial railway system for the purposes of the entire and efficient operation of each division or section comprising the proposed new radials and the railway already acquired, and which it is intended to acquire. It is desired that separate estimates be made based on operation as at one year, five years and ten years after each division or section is placed in operation.

15. An estimate of the expected cost per horse power per year with reference to the amounts of power required under the foregoing for each division and section of the system. It is desired that separate estimates be made, based on operation as at one year, five years and ten years after each division or section is placed in operation.

16. Detailed estimates of expected revenue from all sources, classified under the various divisions or sections and itemized under the several classes of business, i.e., passenger, goods, etc. It is desired that separate estimates be made based on operation as at one year, five years and ten years after each division or section is placed in operation. It is desired also that the estimates include statements of the various rates for passengers and goods upon which they are based.

17. It is desired that, if possible, a map or maps be furnished which will indicate graphically or otherwise the density of population and the density or intensity of industrial or other activities along or tributary to the lines of the entire radial railway system as now proposed.

The commission met again in August, going over information which had been received and arranging a programme for future sittings.

### Glasgow Tramways Buy Rails in the United States.

Canadian Trade Commissioner J. Vernon McKenzie, wrote from Glasgow, Scotland, Aug. 5:—A contract for 10,000 tons of steel rails and fishplates is expected to be awarded very shortly by the Glasgow corporation to the United States Steel Products Co. The sending of this contract abroad has caused a great deal of controversy not only in local municipal circles, but also in the wider field of commerce throughout the country. The corporation invited 21 firms to tender for this order, and out of these only two applied — One United States firm and one English firm, the home firm being £4 10s. a ton higher in price than its foreign competitor. The relative prices were in the neighborhood of £28 and £24. The Glasgow Tramways Committee recommended that the United States Steel Products Co.'s offer be accepted, owing to the fact that there would be a saving of more than £40,000 on the order, but definite acceptance has not yet been given, owing to the fact that, under the standing orders of the town council, agents acting for firms in a foreign country must send to the corporation an authenticated guarantee that the

### Canadian Electric Railway Association.

Honorary President, Lieut.-Col. J. E. Hutcheson, General Manager, Montreal Tramways Co.

Honorary Vice President, Acton Burrows, Proprietor and Editor, Canadian Railway and Marine World.

President, A. Gaboury, Superintendent, Montreal Tramways Co.

Vice President, G. Gordon Gale, Vice President and General Manager, Hull Electric Co.

Honorary Secretary-Treasurer, pro tem, A. Eastman, Vice President and General Manager, Windsor, Essex & Lake Shore Rapid Railway Co.

Executive Committee, The President, Vice President, and F. D. Burpee, Manager, Ottawa Electric Railway Co.; C. C. Curtis, Manager, Cape Breton Electric Co.; A. Eastman, Vice President and General Manager, Windsor, Essex & Lake Shore Rapid Railway Co.; Geo. Kidd, General Manager, British Columbia Electric Railway Co.; M. W. Kirkwood, General Manager, Grand River Railway Co. and Lake Erie & Northern Railway Co.; A. W. McLimont, Vice President and General Manager, Winnipeg Electric Railway Co.; R. M. Reade, Superintendent, Quebec Railway Light & Power Co.; Lt.-Col. G. C. Royce, General Manager, Toronto Suburban Railway Co.; C. L. Wilson, Assistant Manager, Toronto & York Radial Railway Co.

Official Organ—Canadian Railway and Marine World, Toronto.

chargeable to the railway system and its operation.

12. General description, number, classification (or types), and detailed estimates of cost of new rolling stock intended to be employed in the operation and maintenance of the various divisions of the system proposed, already acquired and to be acquired. These to include locomotive, passenger, goods and work cars and all other rolling stock necessary for the efficient operation as proposed and provided for under the various estimates.

13. Detailed estimates of annual costs of (a) maintenance, (b) operation of each division or section of the proposed new radials and of the railways already acquired or intended to be acquired (including amounts to be set aside for overhead, management, superintendence, upkeep, etc., of the general system). It is desired that separate estimates be made based on operation as at one year, five years and ten years after each division or section is placed in operation. It is desired also that the rates and amounts proposed to be allotted in these estimates for interest, depreciation, sinking

work will be carried through under trade union conditions. This guarantee has not yet been given, and a member of the council has alleged that in the U.S. the steel worker is lower paid and works longer hours than in this country, and also that the United States Steel Products Co. with another company was responsible for the failure of a conference of employers and workers called not long ago to form some organization for the prevention of useless strikes. He objected to the steel workers in Scotland and England being exposed to competi-

tion from a U.S. company by which trade unions are not recognized. It is presumed that on the receipt of the guarantee the contract will be forthwith awarded.

The General Manager of the Glasgow Tramways has written as follows to the Canadian Trade Commissioner at Glasgow:—"If there are any firms in Canada, rollers of tram rails, to whom future inquiries would be of interest, I shall be glad to receive a note of their names and addresses. In the way of renewals of our track, this present order of 10,000 tons represents our requirements for two

years, but there is the possibility that some of the extensions for which we have powers may be gone on with, and used up in about half this time."

In this case the rails might, no doubt, be If any Canadian manufacturers of tramway equipment suitable for Scotland, or rollers or tramway rails, will communicate with the Trade Commissioner in Glasgow, giving details as to the products they desire to export, arrangements will be made to take the matter up direct with the Glasgow and other Scottish corporations.

## Increases in Electric Railway Passenger Fares.

**Brandon Municipal Ry.**—It was stated in Canadian Railway and Marine World for July that the Manitoba Public Utilities Commissioner had approved of an increased schedule of fares for the Brandon Municipal Ry. We have since been supplied with a copy of the order, which states that a hearing was held in Brandon, that due consideration had been given to the effect of increases and that an investigation of the railway's operations had been made. Following is a comparison of the old and new fares:—

	New.	Old.
Cash . . . . .	7c.	5c.
Unlimited tickets . . . . .	6 for 35c.	5c.
Workmen's tickets . . . . .	5c.	6 for 25c.
Children's tickets . . . . .	8 for 25c.	10 for 25c.

**British Columbia Electric Ry.** applied recently to the Board of Railway Commissioners for approval of its tariff B.C. E.R. 30, C.R.C. 2, between points on its Central Park interurban line, district 1, between Vancouver and New Westminster. No change is made in the regular fares. Only the commutation fares are affected. At present books of 10-ride and 50-ride tickets are sold. It is proposed to eliminate the 50-ride books entirely and raise the price of the 10-ride books. To certain points there will be an increase of 40%, but the old rates are inequitable and should never have been put in force. One of the reasons for the proposed new tariff is to prevent combinations of rates between Vancouver and New Westminster. By means of combinations it is possible to travel between the two cities for 11c., with a transfer to city lines in both places. The regular fare is 25c. On this line the fare is 5c. from New Westminster to certain points, whereas the regular fare on city lines in New Westminster is 6c. City line passengers have been buying commutation rate books, ostensibly to transfer to the interurban line, but really to travel for 5c. instead of 6c. The new rate on the 10-ride book is approximately 1½c a mile and the lowest combination between Vancouver and New Westminster is 19½c.

The company has also applied to the Board of Railway Commissioners for authority to increase its cash fare in the City of Victoria to 7c.

**Calgary Municipal Ry.**—On City Commissioner A. G. Graves' recommendation the city council made several changes in fares recently. The cash fare theretofore 5c., has been advanced to 10c.; two tickets are being sold for 15c., four tickets for 25c., instead of five for 25c. as formerly; and 20 for \$1, instead of 22 as formerly. School children's tickets are left at 8 for 25c. The object in raising the cash fare to 10c. is stated to be to eliminate the handling of coppers and making change on the cars. The fixing of ticket rates at 2 for 15c. and 4 for 25c. will, it is believed, cause regular

users to buy books of 20 for \$1, and thus save the motorman-conductor on one-man cars handling a lot of small change. Following is a comparison of the old and new fares:—

	New	Old.
Cash . . . . .	10c.	5c.
Tickets . . . . .	2 for 15c.	5 for 25c.
" . . . . .	4 for 25c.	20 for \$1
" . . . . .	20 for \$1	22 for \$1
School children's tickets . . . . .	8 for 25c.	8 for 25c.

Notwithstanding the increase in fares, it is reported that the receipts for the last 15 days of July were \$220 a day short of the average daily revenue necessary to meet requirements. Superintendent Brown is reported to have recommended that the schedule of fares as given above be amended by reducing the number of tickets to be sold for \$1 from 20 to 18.

The city council is reported to have decided on Aug. 17, by a vote of 7 to 3, to reduce the number of street car tickets sold for \$1 from 20 to 18, the altered rate to go into effect at midnight Aug. 17. A press report of Aug. 18 stated that in the interval between the passing and coming into effect of the new rate \$6,100 worth of tickets were bought by citizens at the old rate.

**Cape Breton Electric Co.**—Under an order of the Nova Scotia Public Utilities Commission a new fare schedule was put in operation in Sydney and adjoining municipalities on Aug. 15. The new schedule provides for a 10c. cash fare in the City of Sydney, and in the towns of North Sydney, Sydney Mines and Glace Bay; metal tickets are sold two for 15c., four for 30c., and in even multiples of two at the same ratio, each ticket will be accepted in lieu of a single cash fare. On the Sydney and Glace Bay interurban line the new fare is 7½c. per zone (instead of 6c. as heretofore) on the metal ticket system, the cash fare being 10c. There are five zones on the line, and a passenger can pay all in metal tickets or in metal tickets and cash. Through the five zones from Sydney to Glace Bay the ticket fare is 37½c. and the cash fare 40c.

**Fort William Municipal Ry.**—The Fort William, Ont., city council has under consideration a proposition for increasing fares. A zone system has been suggested, but a press report states this is not favored by some of the members of the council's utilities committee, and that the new fares will probably be:—Cash, 7c., or 4 tickets for 25c.; children's fare, 3c., or 10 tickets for 25c.; school children's fare between 8 and 9.30 a.m. and 3.30 and 5.30 p.m., 5c., or 8 tickets for 25c. It was expected that the new fare schedule would be approved in time to put it in operation Sept. 1.

**Regina Municipal Ry.**—The Regina, Sask., city council, on Aug. 4, approved of a new fare schedule for the Regina

Municipal Ry., effective Aug. 5, which is compared with the old one as follows:—

	New.	Old.
Cash . . . . .	10c.	5c.
Tickets . . . . .	2 for 15c.	5 for 25c.
" . . . . .	4 for 25c.	5 for 25c.
" . . . . .	17 for \$1	21 for \$1
Children under 14—		
Cash . . . . .	5c.	5c.
Tickets . . . . .	8 for 25c.	10 for 25c.
Workmen's tickets . . . . .	Abolished	8 for 25c.

**Kingston, Portsmouth & Cataract Electric St. Ry.**—A press report, Aug. 26, stated that the Kingston, Ont., city council had under consideration an application from the company for permission to do away with the sale of tickets at reduced prices, and to charge a straight 5c. fare.

**Montreal Tramways Co.**—Owing to the increased wages awarded to the employes by a board of conciliation, to date from July 1, it is estimated that \$800,000 will be added to the company's wage bill for the year. Under the circumstances the company applied to the Montreal Tramways Commission to permit the charging of increased fares. The Commission on Aug. 20 authorized certain increases from Sept. 1, the new rates comparing with the old as follows:—

	New.	Old.
Cash fare . . . . .	7c.	7c.
Tickets . . . . .	4 for 25c.	5 for 30c.
" . . . . .	50 for \$3	44 for \$2.50

The above fares are within the uniform territory from 5 a.m. to midnight. There is no change in the after midnight rate, which remains at 15c.; school children's tickets, 7 for 25c., are also unchanged. The rates outside the uniform territory are not changed.

**The Toronto Suburban Railway's Standard Passenger Tariff, C.R.C. 1,** which applies to its interurban lines only, and which was approved by the Board of Railway Commissioners in July, as stated in Canadian Railway and Marine World for August, is based on a rate of 2.875c. a mile. The rates previously in force were limited to 2c. a mile, under the Ontario Railway Act, but the line is now under Dominion jurisdiction, owing to its absorption by the Canadian National Rys.

**Winnipeg Electric Ry.**—A Winnipeg press dispatch of Aug. 23 states that the Manitoba Public Utilities Commission gave judgment on that day on the company's application for power to charge increased fares on its lines in Winnipeg, and on the suburban lines owned by its subsidiaries, the Winnipeg, Selkirk & Lake Winnipeg Ry. and the Suburban Rapid Transit Co. The Commissioner is reported to have announced that the increase granted are to give the companies affected a return of 8% on their investment. The estimates of the increases necessary were based on computations and valuations made by expert appraisers. The company's plants were valued at \$24,369,431. The increased

fares allowed will provide an additional \$450,000 annual income, according to street railway officials. Wage increases recently granted employes will absorb \$300,000 of this amount, they said, and the balance will be devoted partly to suburban extensions and partly to paying a dividend to shareholders. The \$400,000 increase in calculated on a basis of an annual paying passenger list of 60,000,000. The average fare will be raised

from 5½c. to 6¼c. The cash fare is to be 7c. on the city lines instead of 6c. as heretofore, 4 tickets to be sold for 25c.; workmen's tickets are abolished, but school children's tickets to remain the same as heretofore, 8 for 25c. The new fares are to go into operation Sept. 1.

The fare from Winnipeg to Selkirk is raised from 60 and 80c. to 75 and 90c. The Headingly and other suburban lines are put on the zone system, with a 5c.

fare in each zone. It is stated that the City Solicitor announced that an attempt would be made to have the decision modified.

The company is reported to have announced Aug. 24 that tickets which were sold at the old rates could not be used after Sept. 1, but would be redeemed at the company's offices at the price paid for them, and that a new series of tickets would be issued at the new rates.

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

**Calgary Municipal Ry.**—Press reports state that tenders will be received to Sept. 21 for the construction of a street railway crossing, and that an estimate has been prepared showing that the cost of the proposed extension of the line on Centre St. north will be \$9,475, exclusive of rails. (July, pg. 392.)

**Cape Breton Electric Co.**—A press report of Aug. 20 stated that the City Solicitor of Sydney, N.S., was about to take up the question of the extension of the Cape Breton Electric Co.'s railway lines in Sydney, with the Nova Scotia Public Utilities Commission. (June, pg. 316.)

**Chatham, Wallaceburg & Lake Erie Ry.**—A press report states that local merchants are of opinion that instead of tearing up the Chatham, Wallaceburg & Lake Erie tracks on King St., Chatham, Ont., before putting down new pavement, the city council should apply to the Hydro Electric Power Commission of Ontario to take over the railway and extend it from Erie Beach to Government Park, Morepeth, Ridgetown, Thamesville, Florence and Dresden. A line through these places would, it is stated, serve a large area now without railway facilities. (Jan., pg. 34.)

**Grand River Ry.**—A press report states that plans filed with the Galt, Ont., city council for a new right of way through the city provide for taking the line off the streets and carrying it along a private right of way, starting from Hunter's corner, passing under the subway beside the G.T.R. and the C.P.R., and then paralleling Mill Creek into the center of the city to the C.P.R. yards, to which point the Lake Erie & Northern Ry. runs. Between the crossing of Dundas and Main Sts. the line will be double track, the building of which work will necessitate the removal of the C.P.R. freight shed. A passenger station will be built at Main St., and a spur line will be run to the C.P.R. station. The work which the company has in hand on the north end of the line is reported to be practically completed, so that it is expected that the work in Galt will be put in hand at once and completed in time for the operation of traffic over the new route about the time the company's franchise along Water St. expires, viz., Feb. 2, 1921. Another reason for making the change of route is to bring the line up to the same standard as the Lake Erie & Northern Ry., to run heavier traffic over it, and to eliminate stops. (Mar., pg. 145.)

**Hamilton, Grimsby & Beamsville Electric Ry.**—We are officially advised that it is proposed to rebuild the car barn at Beamsville, Ont., which was destroyed by fire Dec. 28, 1919. (Feb., pg. 81.)

**Hamilton St. Ry.**—A press report states that the Dominion Power & Transmission Co. proposes to start work immediately on the laying of additional tracks in the west end of Hamilton. The pro-

jected line is from Margaret St. to Paradise Row, and thence westerly to within 800 ft. of the Hamilton & Dundas Ry.

We are officially advised that it is proposed to build about two miles of new line westerly on King St., to the McKilrick survey. (Aug., pg. 450.)

**Hydro Electric Ry., Essex Division.**—We were officially advised Aug. 10 that it was expected to begin laying about a mile of second track on London St., Windsor, Ont., between Aug. 23 and 30. (July, pg. 392.)

**Levis County Ry.**—A press report of Aug. 18 stated that the company was straightening a portion of the line in Levis, Que. (Dec., 1919, pg. 675.)

**Montreal Tramways Co.**—We are officially advised that the company is reconstructing about nine miles of its track in Montreal, and in Outremont, and that it is also building a substation on Cote St., Montreal. (Aug., pg. 450.)

**New Brunswick Power Co.**—We are officially advised that the company is building a 3,000 ft. extension of its line in East St. John, N.B., the material for which is on hand.

Referring to criticisms as to the betterments work in progress on the lines in St. John, N.B., T. H. McCauley, General Manager, is reported to have said Aug. 7 that the material being put in at the corner of Charlotte St. and King Square, while not bought recently, is not worn; it had been installed at another point but was not used. The spacing of ties is good standard work; concrete is a superior foundation to wood and will last longer. Special attention is being given to bonding before the work is completed so as to eliminate, as far as possible, electrolysis to water and other mains. "The company," added Mr. McCauley, "is not desirous of evading its obligations in any way, but is willing to more than keep pace with the city in any reasonable undertaking." (Aug., pg. 450.)

**Niagara, St. Catharines & Toronto Ry.** A press report states that the company proposes to build a car shop at St. Catharines and that G. C. Briggs, Architect, Canadian National Rys., Toronto, has prepared the plans. (Dec., 1919, pg. 670.)

**Nova Scotia Tramways & Power Co.**—A press report states that a committee representing the Halifax, N.S., City Council, and representatives of the N. S. T. & P. Co., after discussing the city paving situation as it affects the company, waited on the Nova Scotia Premier on Aug. 4 to arrive at a plan by which the company could be financially aided so that the paving might be proceeded with. (Jan., pg. 34.)

**Ottawa Electric Ry.**—A press report states that an automatic switch has been installed at the corner of Banks and Sparks streets, and that two other similar switches will be installed at Elgin and Sparks Sts., and one at the corner

of Rideau and Sussex Sts. (May, pg. 257.)

**Peterborough Radial Ry.**—A press report states that a report on proposed extensions of this railway in Peterborough, Ont., and vicinity, has been completed by the Hydro Electric Power Commission of Ontario's engineering staff. (May, pg. 257.)

**Quebec Ry., Light & Power Co.**—We are officially advised that the company has under consideration an extension of about half a mile along Marie Bourgeois Ave. (formerly named Levis Ave., from St. Cyrille St. to St. Foy Road, Quebec. This matter was under discussion with representatives of the city council, Aug. 13, and a press report states W. J. Lynch, General Manager, promised that construction would be started immediately and that the line would be ready for operation in the autumn. (Aug., pg. 450.)

**Saskatoon Municipal Ry.**—A press report states that Saskatoon, Sask., rate-payers have passed a bylaw authorizing the building of a second track on a portion of the Saskatoon Municipal Ry. lines at a cost of about \$3,000. (Dec., 1919, pg. 670.)

**Toronto Civic Car Lines.**—The construction of a permanent double track line on Bloor St. from Runnymede Road to James St., at a cost of \$104,245, has been recommended by the City Works Commissioner and the matter is under consideration by the city council. (Aug., pg. 450.)

**Toronto Ry.**—A frame car barn is being built at the corner of McLean Ave. and Queen St east, Toronto. (Feb., pg. 81.)

**Winnipeg Electric Ry.**—A press report of Aug. 13 stated that representatives of the Winnipeg City Council were negotiating with the company for continuing to Keewatin St., a temporary track which is already laid on Logan Ave. more than half way to the C.P.R. Deloraine Branch.

The reconstruction of the car barns at Main St. and Assiniboine Ave., destroyed by fire some months ago, is reported to have been started. The reconstructed building will be of reinforced concrete throughout, somewhat longer than the old one, with concrete floor and wired glass windows. It will accommodate 50 cars. Pratt & Ross are the architects and the contract is reported to have been let to Claydon & Co., the estimated cost being \$60,000. (Aug., pg. 450.)

**Minneapolis Street Car Fares.**—A press report states that the Minneapolis, Minn., City Council has passed an ordinance authorizing the Twin Cities Rapid Transit Co. to charge a 7c. fare as from Aug. 16 and that if this does not produce sufficient to equal the 1919 surplus, a 7c. cash fare is to be charged from Dec. 15 with 4 tickets for 25c.

## Electric Railway Employes' Wages, Working Conditions, Etc.

**London St. Ry.**—A press report of Aug. 22 states that under the Ontario Railway and Municipal Board's management of this railway for July there was a surplus over operating and certain fixed charges of \$600. Under the arrangement with the employes this surplus has to be distributed by an increase of wages, and a bonus of 1c. an hour was therefore declared. The men are reported to be dissatisfied with conditions, claiming that they were given to understand that the rate of wages was to be increased to 48c. an hour. The men ask that the bond redemption fund be abandoned and that the money so released be used for payment of increased wages. The company and the Ontario Railway and Municipal Board refuse to agree to this. It is reported that the men are now demanding 52c. an hour, and that if this rate is not granted there will be a strike early in September.

**Montreal Tramways Co.**—In April the conductors and motormen demanded increased wages and improved working conditions, including an 8-hour day. The rate per hour asked for by them in comparison with the rates then in force was:

	Existing.	Asked.
First year . . . . .	37c.	.....
First 3 months . . . . .	.....	70c.
Next 9 months . . . . .	.....	72c.
Second year . . . . .	40c.	75c.
Third year . . . . .	44c.	.....
After third year . . . . .	48c.	.....

The company on May 7 declined to accede to the demands, and the matter was subsequently discussed between representatives of the employes and the Montreal Tramways Commission. The men were advised that the Commission was determined not to increase the fares this year, and pointed out that it would not be possible to provide the all round wages increase asked for by adding at least 2c. to the existing fares, adding that it might be found possible to provide funds for a bonus, which, however, would fall far short of the amount asked for. It was subsequently stated that the amount available for this suggested bonus did not exceed \$300,000, and that its distribution would not include the men on the cars, whom the commissioners considered were sufficiently paid. A plan of insurance up to \$1,000 was also offered. The men refused these offers on May 27 and applied for a board of conciliation, which was appointed June 10, and was composed of Justice Archambault, chairman; E. W. Villeneuve, representing the company, and J. A. Woodward, representing the men. The Board's unanimous report, dated Aug. 3, reviews the problem before it as it affects the company, its employes and the public; lays down certain general principles which must be recognized in arriving at a decision, and then examines in detail the questions of the prevailing conditions of employment on the company's lines and the rate of wages earned and the cost of living, as well as the cost of transportation to the company, and the probable effect of increased expenses necessitating an increase of fares. In conclusion, the board said: "Before setting down the figures which we have decided upon, we wish to state that we have, to the best of our ability, analyzed the evidence and weighed with care all the arguments submitted, with a desire to give to the employes the greatest possible measure of advantage compatible with the intangible rights of the public and the resources of the tramway's enter-

price. We recommend that the following scale of wages shall be accepted, with retroactive effect to July 1." The schedule attached deals with all departments of the company's employes, the portion affecting conductors and motormen being as follows:—First year, 45c. an hour, instead of 37c. Second year, 50c., instead of 40c. After the second year, 55c., instead of 44 and 48c.

"Under the existing scale of pay and conditions of work, 3 1/2% of the conductors and motormen earn 37c. an hour; 11 2/5% earn 40c.; 7 4/5% earn 44c.; 70 3/10% earn 48c. Under the proposed scale: 3 5/10% will earn 45c.; 11 4/10% will earn 50c.; 85 1/10% will earn 55c.

"With regard to the other employes we recommend substantial increases for all of them."

The men met Aug. 5 to consider the report, and passed a resolution rejecting it, and authorizing the presentation of an ultimatum to the company calling for the acceptance of the original demands in full within 24 hours. The company announced Aug. 6 that it could not meet the men's demands. On Aug. 7 the men held another meeting, after having announced that in the event of a strike being decided upon the men would go out on Aug. 9. A more conciliatory attitude was taken by the men at the meeting Aug. 7, and a further conference was arranged to take place with the company's representatives. A press report states as a result of the conference concessions have been made by the company, and that the executive of the men's association on Aug. 13, recommended the acceptance of the award. A meeting of the men was held on Aug. 14. They decided by a vote of 1,699 to 547, to accept the board's award, subject to an amendment, agreed upon, regarding shopmen.

**New Brunswick Power Co.**—The agreement arrived at recently between the company and the Amalgamated Association of Street and Electric Railway Workers of America, Division 663, covering the street railway employes in St. John, effective from June 15, and is to continue in force until June 15, 1921, and yearly thereafter unless mutually changed, notice of any change desired to be given 30 days before the expiration of any year. The agreement covers working conditions, fixes a 9-hour day for motormen and conductors and uniform men; an allowance of 10c. an hour extra to motormen and conductors when called upon to operate snow ploughs and sweeper equipment, and provides for the appointing of a grievance committee. Following are the rates of wages per hour fixed in the agreement compared with the former rates paid conductors and motormen:—

	Old rate.	New rate.
First 6 months . . . . .	39c.	49c.
Second 6 months . . . . .	41c.	51c.
After one year . . . . .	43c.	53c.
After two years . . . . .	45c.	55c.

Time and a half is to be paid for overtime, and on holidays, and 10c. an hour extra to uniform men required to work on Sunday.

It is said that the signing of the wages agreement was held up owing to the company's wish to insert a section providing for the operation of such cars. After some negotiation a document was drawn up and signed by T. H. McCanley, General Manager, on behalf of the company, and by F. A. Campbell and P. Moore on behalf of the men, providing

"That a further agreement be drawn up to the effect that the company may finish changing one or two cars as already started, that same be given a demonstration by the company, and that in the event of such cars proving satisfactory to the city commissioners and citizens, that the employes and company agree to further negotiate as to the safety and reasonableness and wages and working conditions of operating the same." In the event of the negotiations not terminating in an agreement, both sides agree to submit the matter to arbitration or to conciliation under the Lemieux Act.

**Toronto Suburban Ry.**—The board of conciliation presented majority and minority reports Aug. 8. The majority report, signed by Judge Barron, chairman, and G. D. Kelley, representing the company, recommended the granting of 15% increase to the men employed on an hourly basis, and an increase of \$10 a month to those paid by the month. L. Braithwaite, representing the men, recommended greater increases.

**Winnipeg Electric Ry.**—The employes submitted to the company on April 8 a draft of an agreement as to wages and working conditions which they demanded to have put in operation on the expiry of the then existing agreement on May 1. The old and the proposed rates of wages per hour were as follows:—

	Old		Proposed	
	Week-days	Sundays	Week-days	Sundays
First 6 months	46c.	51c.	80c.	90c.
Second 6 months	49c.	54c.	85c.	95c.
After 1 year	52c.	57c.	90c.	\$1
After 2nd year	55c.	60c.	.....	.....

An agreement not being reached by negotiation, a board of conciliation was appointed, consisting of Judge Myers, chairman; C. E. Dafoe, representing the company, and R. S. Ward, representing the men. The board held its first sitting May 19, and sat on three other days in May, and on six days in June, hearing evidence and arguments. A majority report, dated July 5, signed by Judge Myers and C. S. Dafoe, and a minority report of the same date, signed R. S. Ward, were forwarded to the Minister of Labor. The majority report stated that the board had granted certain concessions to the employes respecting passes, platform time, overtime and an amount guaranteed as weekly wage to extra men. The amount granted as an increase in wages would place the employes in more favorable circumstances than street railway employes in most of the Canadian cities, and on a par with those in Toronto. The report added: "The terms of the proposed agreement and schedule are fair to all parties, considering the circumstances." The wages schedule recommended for conductors and motormen was as follows per hour.

	Week days.	Sundays.
First 6 months . . . . .	50c.	55c.
Second 6 months . . . . .	53c.	58c.
Second year . . . . .	57c.	62c.
Third year and after . . . . .	60c.	65c.

Extra men to be guaranteed \$20 a week, instead of \$18 as formerly. Mr. Ward, in his minority report, recommended certain other concessions as to uniforms, etc., but added: "Although I am convinced that the changes in working conditions asked for by the men were reasonable, and, with some slight modifications should have been granted, I could have signed the report if an equitable increase in wages had been secured." He recommended that the increases of wages granted by the majority report

should be doubled. The company accepted the majority award, but the men declined to do so. The question of a strike was discussed, and on a vote it was decided not to strike and finally the majority award was accepted and the new agreement was signed Aug. 2. The new rate of wages dates from May 1, when the old agreement expired.

### The Toronto Railway and City of Toronto.

The Toronto Ry. Co. has acquiesced in the city's decision to take over the company's railway property, according to the terms of the original agreement, when the franchise expires in Sept. 1921, and it passed the following bylaw July 30:—

"Whereas the corporation of the City of Toronto passed a bylaw on June 21, 1920, numbered 8448, to provide for giving of notice to the Toronto Ry. Co. of the intention of the corporation of the City of Toronto to take over certain real and personal property of the Toronto Ry. Co. as therein mentioned. And whereas the said bylaw and the notice thereby authorized to be given to the Toronto Ry. Co. were duly served on the company on June 26, 1920. And whereas the Toronto Ry. Co. acquiesce in, assent to and accept the action of the corporation of the City of Toronto in the enactment of the said bylaw and the giving of the said notice. Be it therefore enacted that the Toronto Ry. Co. acquiesce in, assent to and accept the determination of the corporation of the City of Toronto to take over all the real and personal property of the company necessary to be used in connection with the working of the railways which the said corporation is entitled to take over under the provisions of the act of incorporation, agreement and conditions therein mentioned. And be it further enacted that a duplicate of this bylaw be served upon the corporation of the City of Toronto."

**Glasgow Tramway Fares:**—Canadian Trade Commissioner J. Vernon McKenzie, Glasgow, Scotland, writes:—

"In Glasgow there is no longer a chance for the thrifty Scotsman to take a ride on his tram for a wee bawbee. A short while ago the minimum fare on the Glasgow tramways was raised from a halfpenny to a penny, one of the last of the necessities of life to be hit by the increased cost of living in this country. Tickets, or as they are called here, 'tokens,' if bought at certain specified depots, may still be procured at 16 for 1s., thus reducing the cost of travelling 'a minimum stage' to three-fourths of a penny. No tokens are sold on the trams. Glasgow tramways have long been famous throughout the world as perhaps the leading exemplification of municipal enterprise, and they have been particularly noted for their efficiency and economy. A passenger in Glasgow may ride 1.15 mile for his penny; the highest fare paid is 8d., for which he is entitled to travel from one of the city's suburbs to another, 14½ miles."

Windsor, Ont., City Council's industrial committee invited the operating officials of the Hydro Electric Ry. Essex Division to a conference on Aug. 3, to discuss the service given in the city by the recently taken over Sandwich, Windsor & Amherstburg Ry. It is reported that the officials said it was hoped to put on five more cars within a short time.

## Mainly About Electric Railway People.

W. E. Blodgett, heretofore Secretary-Treasurer, Utah Light & Traction Co., Salt Lake City, has been appointed Comptroller, Winnipeg Electric Ry., and subsidiaries, in charge of all accounting, succeeding A. R. Ross, Internal Auditor, resigned.

Frank L. Butler, heretofore General Superintendent, Winnipeg Electric Railway Co., has been appointed Manager, with charge of operation and maintenance of the company's electric railway, light, power and gas industries, and also of the subsidiary companies, Suburban Rapid Transit Co. and Winnipeg, Selkirk & Lake Winnipeg Ry. He began his transportation work in 1894, when he entered the service of the Vandalia Rd., now a part of the Pennsylvania Lines, remaining with that company in various capacities, and at different points, till 1909, when he was appointed Superintendent, Denver & Inter Mountain Ry.,



F. L. Butler,  
Manager, Winnipeg Electric Railway.

Denver, Col., of which he afterwards became Vice President and General Manager. On Sept. 1, 1911, he was appointed General Manager, Alta, Jacksonville & Peoria Ry., which was then under construction. Shortly afterwards he was appointed its receiver and completed the line to Jerseyville, Ill., remaining as receiver until May, 1914, when the property was sold at a receivership sale. In July, 1913, he was appointed General Manager, Chicago & West Towns Ry., and the Suburban Ry., with office at Chicago, and on April 1, 1918, he was appointed General Superintendent, Winnipeg Electric Ry. The position of General Superintendent, Winnipeg Electric Ry. has been abolished.

W. F. Edwards, heretofore Traffic Inspector, Winnipeg Electric Ry., has been appointed Traffic Superintendent, succeeding A. Macdonald, who resigned on account of ill health and returned to Montreal.

Geo. A. Chapman, Assistant General

Claims Agent, the Detroit United Railways, died recently after a week's illness. He was born in 1872, and was a graduate of the University of Michigan. For five years he practiced law at Hudson, Mich., and was connected with the C. H. & D., and Pere Marquette Railroads for a number of years. He entered the Detroit United Railways service Aug. 1, 1916.

T. H. McCauley, General Manager, New Brunswick Power Co., spoke on electric railway matters before the St. John, N.B., Rotary Club, Aug. 16.

John Montgomery, Roadmaster, Toronto & York Radial Ry., Mimico Division, was camping with his family in a large marquee on the lake front at Long Branch. The marquee was destroyed by fire Aug. 14, and, in endeavoring to save some of the contents, Mrs. Montgomery was burned about the arms and shoulders.

W. G. Murrin, Assistant General Manager, British Columbia Electric Ry., and Mrs. Murrin returned to Vancouver recently, after spending several weeks in England. In addressing the Vancouver Electric Club, shortly after his return, Mr. Murrin said that British investors are watching British Columbia closely, and that all matters concerning the attitude of the public towards public utilities are being carefully noted. Unfortunately, the province's reputation in Great Britain is none too good, and if electrical development is to go ahead very careful attention must be paid to the treatment of capital already invested here. Capital is very much in demand in England for industrial purposes, and whereas 5% was paid formerly, the present rate is around 10%, and Canadian securities will therefore have to pay similar returns if they expect to obtain capital in competition with British industrial issues.

Hon. J. L. Perron, Minister without portfolio in the Quebec Government, and one of the Montreal Tramways Company's counsel, had between \$5,000 and \$6,000 of silver fox furs, fur coats and muffs stolen from his house recently.

**Permanent Charges, Etc.**—A large number of street railway companies have been successful in convincing civic authorities and the powers that be, that pavement charges and other franchise taxes which were all right in the old horse car days are a rank imposition now, and have been relieved from them. They are a tax on street car riders, and judging by developments in many cities the sentiment now generally prevailing indicates that car riders are more interested in the railway furnishing service at the lowest possible fares than they are in having the company act as a tax gatherer for the municipality.—Winnipeg Electric Railway Service News.

**B.C. Electric Railway Freight Rates.** The Interstate Commerce Commission has decided that electric railways may increase their freight rates by the same percentages as have been approved for steam railway trunk lines in the same territory.

Winnipeg Electric Ry. Co.'s employes have, according to a press report, decided by a referendum to affiliate with the One Big Union. The employes union has been an independent organization since the general strike of 1919.

# Would Motor Busses Solve, or Help to Solve Toronto's Transportation Problems?

The Toronto Bureau of Municipal Research has prepared the following:—

The old stage coach which served our fathers and grandfathers is with us again, in the guise of the motor bus. The motor bus has all the advantages of its prototype and none of the disadvantages. It has the obvious advantage of mobility over the street car; but is it feasible in our climate? Can it supplant street cars or only supplement or feed them? Can it serve the suburbs only? Or, will street cars retain their hold on the suburbs, while the motor bus serves the down town districts, at least for local traffic? What have been the actual results of operation elsewhere? While much has been said about the theory of motor bus transportation, comparatively little has been said about its actual operation. To make a beginning in this direction, the bureau has made enquiries in various matters. While information was not available in many instances, the material received has been tabulated and is presented herewith.

with street cars; local service not competing with street cars; and interurban service competing with both steam and electric lines. The types of machines used are converted touring cars, or one-ton trucks with special 15 passenger bodies. Certain bus lines issue transfers to other bus lines, with no extra charge. There are approximately 300,000 passengers hauled out of the Union stage depot here each month."

Minneapolis, Minn.: "Each bus averages 100 miles a day, with an average of 100 minutes a round trip (of 20 miles). Each bus will average 150 passengers a day. The operators of the cars are paid a per diem rate, plus a commission. This provides an incentive for overloading the buses at times."

New York, N.Y. (municipally-owned line): "Certain trolley lines . . . ceased rendering to the public the service required by their franchise . . . The bus was introduced as a makeshift. However, on Sept. 21, 1919, the operation of motor buses was commenced under the

The Akron line, with 8 buses, reports a total cost of 36.78c. a bus mile, which includes overhead. Being operated by an industrial concern, principally for the benefit of its employes, the buses are managed so as to produce no profit and no loss. These buses charge a 5c. fare for a run of from one to three miles, the average journey per passenger being about 1 1/4 miles. The cost per passenger in 1919 was about 4 1/16c.

The cost of operation, per bus mile, on the privately-owned Fifth Avenue line, New York, with 300 buses, is given at 41.55c., not including certain unstated overhead charges. The fare is 10c., and the venture is said to be profitable, although no statement of profit and loss was obtained from the company.

From a study of the replies received it was obvious that these figures are not closely comparable, as the headings for the different items entering into the total costs were not uniform.

Would an Experiment in Motor Buses for Toronto be Justifiable?—The profit-

Summary of Information Received Regarding Motor Bus Operation in American Cities.

CITY	Character of district served	Length of journey	Class of pavements	Fares Charged	Capacity of buses—passengers seated	Type of bus	Number of operators per bus	Length of time in operation
AKRON	Business and residential	1 to 3 miles	Brick—poor	5c. cash	30	Single deck open	One	Several years (3 plus)
CHICAGO	Business and residential	???	Asphalt	10c. cash	—	Double deck	Two	2 years
DETROIT	Business and residential	4 1/4 miles	Asphalt—poor	10c. cash	48	Double deck open and closed	Two	13 days
HUNTINGDON Indiana	Interurban	???	Various and earth and gravel	5c. cash and up	20 to 30	Single deck closed	One	2 years
HOUSTON Texas	City and suburban	Up to 50 miles	Various and earth and gravel	5c. cash and up	5 to 7	"Jitney"	One	???
KANSAS CITY	Business and residential	2 miles	Asphalt and gravel	5c. and 10c. cash	20	Observation	One	3 years
MILWAUKEE	Residential	3 miles	Brick	Buses are Feeders to Street cars*	20	Single deck closed	One	Few months
MINNEAPOLIS	Business and interurban	10-28 miles	Various and earth and gravel	Various	14 to 26	Single deck closed	One	6 years
NEW YORK†	Business and residential	6 1/2 miles	Asphalt	10c. cash	40	Double deck open and closed	Two	13 years
LOS ANGELES	Residential sparsely settled	3 to 7 miles	Asphalt and earth	5c.-20c.	15	Converted trucks	One	—
	Interurban sparsely settled	30 to 130 miles	Asphalt and earth	3c. per mile	12 to 28	Single deck	One	—
PASADENA	Principally suburban and interurban	25 to 35 miles	Asphalt and concrete	Various—less than electrics	14 to 20	Single deck open	One	5 years
SAN FRANCISCO	Residential	???	asphalt	5c. fare*	30	Single deck closed	One	4 years
TOLEDO	Business and residential, crosstown	3 to 4 miles	Brick and wood	5c.-6c. cash	15	Single deck closed	One	—

†The Privately-owned Fifth Avenue Line.  
\*Transfers issued to and from street cars.

## What the Correspondents Say About Service Given.

Akron, Ohio: "Our own experience here at Akron with the Goodyear Heights line is proving very successful from the standpoint of being able to move the residents, who are practically all Goodyear employes, to and from work."

Detroit, Mich.: "The buses run over a regular route and on schedule as regular as that of an electric railway."

Los Angeles, Cal.: "The interurban motor service has become an important element in transportation and is in competition with the interurban and steam railways throughout southern California. There are three classes of motor bus service, viz.: local service in competition

supervision of the Plant and Structures Department . . . There are now operating on 25 routes, 400 buses, each carrying passengers at the same 5c. fare, but twice as quickly as the abandoned trolley lines. About 300,000 passengers are carried each day. I confidently estimate a net profit of \$540,128 a year."

Cost of Operation.—The only systems with regard to which the bureau could obtain authoritative data on the cost of operation, were those of San Francisco, municipally owned, and Akron and New York, both privately owned. San Francisco, with 6 buses operating as feeders to the street railway system at a cost of 23.6c. a bus mile, reports a deficit of 11.6c. a bus mile, on a 5c. fare.

able operation of a motor bus line in any section of a city depends upon the relation of the number of passengers, and the fares charges, to the cost of operation.

It is impossible to estimate, without detailed study, how many people would patronize the motor bus, if installed as an auxiliary to the street railway in any particular section of Toronto, but the cost of operation can be estimated and the number of passengers required in order to meet expenses at a 5c. or 10c. fare can be determined. Taking the maximum unit costs reported as a basis for computation, the cost per mile per bus in Toronto would be 45.61c. This cost might prove to be even greater, due to

the higher cost of gasoline and also to climatic conditions. Assuming these costs to be approximately correct for Toronto, at a 5c. rate at least 10 fares a mile would be necessary in order to make the system profitable. At a 10c. rate, 5 fares a mile would be necessary.

North Toronto has, according to the assessment department figures, a population of about 12,110. This is an increase of 40% over 1914. The civic transportation committee reported, in 1914, that the passenger movement into North Toronto, from street cars and jitneys, was about 4,000 persons in one day. If this be increased by 40% (the rate of growth of population), there will be at least 5,600 people now requiring daily transportation to and from North Toronto.

Eight buses in Akron carried at the rate of about 5,600 persons a day for 312 days in 1919. These buses cost about \$48,000, and are operated on a "no profit, no loss" policy at a 5c. fare. They travelled over brick paved streets which were in bad condition as a rule." North Yonge St. is macadam, in fair condition, and there are several cross streets paved with asphalt and concrete.

It must be noted that in every city in which buses are being operated, with any degree of success, they supplement rather than supplant street cars and rapid transit systems.

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

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

	12 mos. to June 30, 1920		12 mos. to June 30, 1919	
Gross	\$710,210	\$411,605	\$8,737,132	\$7,062,559
Expenses	565,796	362,027	6,259,721	5,284,938
Net	144,414	49,578	2,477,411	1,777,621

**Calgary Municipal Railway.—**

	1920.		1919.	
Car earnings for July	\$77,087.02	\$71,751.04		
Total earnings for July	71,441.11	83,571.99		
Total earnings for 7 months	581,895.59	442,716.17		
Deficit for July	10,603.89			
Deficit for 7 months	25,788.72	\$1,919.18		

**Cape Breton Electric Co:—**

	June 30, 6 mos. to June 30, 1920		June 30, 6 mos. to June 30, 1919	
Gross	\$49,174	\$46,529	\$285,839	\$277,434
Expenses	44,026	36,883	255,036	212,065
Net	\$5,148	9,646	30,803	65,369

**Cornwall Street Ry., Light & Power Co.**—A press report states that at a joint meeting of the Cornwall, Ont., Town Council and Board of Trade on Aug. 8, a proposition for acquiring the Cornwall St. Ry., Light & Power Co. and the Stormont Electric Light & Power Co., from the Sun Life Insurance Co., Montreal, and amalgamating them was approved. The project was submitted by Brigadier General C. L. Hervey, D.S.O., C.E., of Lancaster, Ont., and Montreal, who asked that the town of Cornwall guarantee \$800,000 of 30-year 6% gold bonds of the undertaking, in return for which the town would be paid one-half of the net earnings of the combined companies, the other half going to the promoters of the new company. A committee was appointed to consider the matter and report to the town council, and at a subsequent meeting of the council the mayor was authorized to engage an expert to value the properties and to advise the committee. If the project is favorably reported upon, and is approved by the council, the necessary bylaws will be prepared for submission to the ratepayers.

**London St. Ry.**—A statement as to the company's operations for the two weeks ended June 30 is reported to have been laid before the London, Ont., City Council, July 28, as follows:—

Gross earnings	\$22,062.01
Operating expenses	18,727.53
Net earnings	\$3,334.48
Bond interest	\$1,091.05
Bond redemption	1,509.00
Interest on loan	62.47
Taxes	375.00
	3,037.52
Net income	\$296.96

**Montreal Tramways Co.**—A Montreal press dispatch says that the directors on Aug. 25 declared another dividend to shareholders on record Sept. 8, of 2½% on arrears to be paid on the capital stock of the company. This dividend is for the quarter ended March 31, 1919, and makes the fourth payment amounting to 10% on the total of 15% arrears originally accumulated, this leaves two more distributions or 5% on the total arrears, which, it is said, will be paid within the next few months. The first dividend on arrears was paid on Dec. 31, 1919, and practically a payment of 2½% has followed every two months or so. The company has also paid regular dividends on the capital stock at the rate of 10% a year since the beginning of the year, and up the present three distributions have been made during 1920. The common dividend was deferred in the spring of 1918, but was resumed at the close of 1919. By the regular distribution of dividends on the common stock, shareholders will have received by Sept. 15 next, 17½% since Jan. 1.

**Regina Municipal Railway.—**

	1920.	1919.
Revenue for July	\$26,749	\$28,189
Passengers carried	588,882	582,915

A press report states that the decrease is largely due to the small number of visitors in the city during exhibition week, the total number of passengers carried during the entire week of the exhibition being 182,982, against 188,765 during the four days of the exhibition week in July, 1919.

**St. Thomas Municipal Railway.—**

Receipts for July	\$1,987.75
Expenditures	3,671.11
Deficit	\$1,683.36
Passengers carried, 49,829, against 58,391 for July, 1919.	

**Toronto Civic Railway.—**

	Passengers.	Receipts.
Jan.	2,493,296	\$41,989
Feb.	2,384,431	39,331
Mar.	2,700,264	45,434
Apr.	2,622,993	43,314
May	2,678,059	45,378
June	2,524,803	42,221
July	2,603,931	43,563
	17,957,777	\$301,730

During the same period in 1919 the number of passengers carried was 14,118,000 and the total receipts \$237,870.

**Toronto Railway.—**

	1920		1919	
	Receipts	percentage	Receipts	percentage
Jan.	\$ 652,350	\$110,950	\$ 588,923	\$ 88,339
Feb.	595,861	119,172	545,771	96,563
Mar.	745,706	149,141	615,526	123,105
Apr.	659,340	130,668	600,231	120,046
May	644,453	132,892	620,068	124,014
June	544,833	108,966	491,082	86,217
July	641,793	.....	534,412	128,359
	\$4,498,341	.....	\$3,936,013	\$766,643

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

	June 30, 6 mos. to June 30, 1920		June 30, 6 mos. to June 30, 1919	
Gross	\$1,127,239	\$842,697	\$7,045,748	\$6,133,296
Expenses	757,436	543,040	4,650,618	3,643,296
Net	369,803	299,657	2,395,130	2,490,000

**Winnipeg Electric Ry. and allied companies:—**

	June 30, 6 mos. to June 30, 1920		June 30, 6 mos. to June 30, 1919	
Gross	\$407,625	\$112,615	\$2,644,677	\$1,874,640
Expense	288,822	147,805	1,967,927	1,458,487
Net	118,803	\$35,190	676,750	416,153

\*Deficit.  
The surplus for May, after deducting fixed charges, was \$48,649.25.

**The Toronto Railway and City Percentage Payments.**

As mentioned in our last issue, the Toronto Ry. requested the city to allow it to postpone any further percentage payments to the city, until the city takes over the company's property on the expiration of the franchise in Sept., 1921. The matter was brought before the city Board of Control in July, and referred to the City Solicitor for advice. The question was again brought up at a meeting of the Board of Control early in August, when it was stated that the percentage payments for June and July, due respectively in July and August, were unpaid. The Mayor urged that legal steps be taken immediately for their recovery, and that the consideration of the company's proposal be refused. He was overruled, and the discussion adjourned, pending a conference with the company's General Manager.

The agreement between the company and the city provides for the payment of certain defined percentages, "monthly, and every month during the term covered by the agreement, on the first Monday of each month." No provision is made for any specific penalty in case of failure to pay the amounts on their due dates, but another clause in the agreement provides "that the payment of the said gross percentages monthly, and mileages quarterly, and the fulfilment of the obligations of the said conditions shall be a lien and charge on the said railways and the property used in the working thereof, both before and after the incorporation of the said company intended to be substituted as aforesaid in the place of the said purchasers."

At the time of going to press no decision had been reached by the City Council, but it was proposed that the city's legal department draw up an agreement with a view to deferring payment which, if approved, is to be confirmed by legislation.

**Toronto Transportation Commission.—**

The Toronto City Council on Aug. 5 appointed P. W. Ellis, wholesale jeweller, President Toronto Hydro Electric Commission and Chairman Queen Victoria, Niagara Falls Park Commission; Fred. Miller, of Roger Miller & Sons, harbor contractors, Toronto; and Geo. Wright, hotel proprietor, who is a member of the Toronto Hydro Electric Commission, as a commission to manage and operate the Toronto Ry. after it is taken over by the city on the expiration of the company's franchise in Sept., 1921. In the meantime the commission's duties are to consist of preparation for taking over the property, re-arranging routes, ordering additional cars, etc.

**Three Rivers Traction Co.'s One-Man Cars.—**

In the description of these cars, published in Canadian Railway and Marine World for August, on pg. 448, it was omitted to be mentioned that they were built by the Ottawa Car Manufacturing Co.

The Toronto City Council made a trip over the London & Port Stanley Ry. Aug. 14 on the invitation of Sir Adam Beck.

## Ottawa Electric Railway's Insurance and Benefit Plan.

Canadian Railway and Marine World has given in previous issues considerable information about the O.E.R.'s insurance and benefit plan, and was advised recently that a considerable majority of the company's employes are insured under the plan. As it is a new one and likely to be of interest to other electric railway companies, the certificate issued to employes insuring, is given in full as follows:

### The O.E.R. Insurance and Benefit Plan.

Agreement made this day of 19 , between the Ottawa Electric Railway Co. (hereinafter called the "company"), and (hereinafter called the "employee").

1. The company desires to provide a continuing scheme of insurance for the benefit of its employes, to assist them to make provision for themselves and their families in case of death, illness, or accident not provided for by the Workmen's Compensation Act (Ontario).

2. To attain this object, the company agrees to pay, for each employe, a portion of the premiums for the policies referred to in clause 8 of this agreement and to guarantee that while the employe remains in its employ he will be entitled to benefits nos. , subject to the conditions of this agreement, and the employe agrees to pay to the company the sum of \$ per month.

3. Benefit 1. In case of death from any cause (except suicide within the first year), \$1,000 will be paid to

Benefit 2. Upon retirement from the service, at the age of 65, the employe will have his choice of the following benefits:—

(a) A cash payment of \$1,083.12.

(b) A paid-up insurance policy of \$1,625.00 (subject to further medical examination).

(c) A cash payment of \$416.22, with a paid-up insurance policy of \$1,000.00 (subject to further medical examination).

(d) An annuity of \$100 for the balance of his life, with a guarantee of \$1,000 if he dies before the tenth annuity is paid, the balance will be paid to the beneficiary named above.

If the employe by arrangement with the company remains in the service after reaching the age of 65, any cash payments due him under this agreement will be held in trust by the company, drawing interest at 3% per annum until such time as the employe, retires from the service.

Benefit 3. If the employe is prevented from working, by reason of sickness, or accident occurring while he is off duty, he will receive \$10 a week, but no payments shall be made for disability resulting from venereal disease, nor from any disease for which he is not treated by a physician, nor for the first seven pdays of disability, nor for disability in excess of 26 weeks duration, nor for any bodily injuries received while doing any act or thing pertaining to any trade, business, employment, or occupation for pecuniary gain. The employe agrees that the physician appointed under this plan will be the sole judge as to whether he is not capable of performing his duties, and if he fails to return to work at the time that the said physician declares that he is capable of doing so, he will not receive any further weekly payments on account of that illness or accident.

Benefit 4. When the employe is ab-

sent from duty on account of illness, or accident occurring while he is off duty as referred to under benefit 3, paragraph next above, he will be provided with free medical attendance, but this will not include the cost of surgical operations. He will also have the right to consult one of the company's physicians, at the physician's office, whenever he feels that medical advice is necessary for the benefit of his health.

Benefit 5. In consideration of the employe, continuing while in the employ of the company to pay to the company the sum of \$ mentioned in clause 2, the company undertakes to pay whatever sum is necessary to keep the employe insured under the policies mentioned in clause 8, subject to the following conditions:

(a) If the employe, before reaching the age of 65 ceases from any cause to be an employe of the company the total of the monthly sums paid in to the company by him will be returned to him with interest thereon at the rate of 3% per annum; or instead of accepting such refund the employe may continue the policy in force with the insurance company mentioned in clause 8, according to the conditions prescribed by the insurance company in that event. Provided, however, that in case the employe continues the policy in force, it is agreed that if the cash surrender value of the policy at the time the employe leaves the service of the company is greater than the total of the monthly sums paid by the employe with interest at 3% per annum, such excess belongs to the company, and must be paid to the company by the employe before the company transfers its right in the policy to the employe.

(b) Inasmuch as the withdrawal of any employe from the plan, while remaining in the employ of the company, would tend to do away with the consideration for which the company agrees to make the payments mentioned above, and would tend to prevent the plan achieving the results which it may reasonably be expected to achieve if the employe signing this contract continues to make his payments; it is agreed that if any employe while continuing in the employ of the company, gives to the company, through its Superintendent or other official, written notice that he wishes to withdraw from the plan, or who does not make any payment within 30 days after the day on which such payment became due, such employe shall thereby immediately forfeit all right, claim and interest, if any, that he or his beneficiaries may have had at the time of such notice or failure to pay, and shall not receive any benefits under this plan. And in particular it is agreed that such notice or failure to pay shall operate as a renunciation by the employe of his interest, if any, in all payments previously made by him under this plan, and that such payments shall be forfeited to the company. Provided, that where the employe has no wages due and is in the opinion of the company, temporarily unable to pay premiums on account of illness or other similar cause, the company may relieve the employe from such forfeiture.

4. All the benefits are open to all employes who are paid by the hour or day, the monthly assessment being \$1.50.

5. Benefits 1, 2 and 5 only are open

to employes who are paid by the month, the monthly assessment being \$1.25.

6. No entrance fee or money charge of any kind will be made except the above monthly assessment.

7. The employe agrees that the assessment mentioned in clause 2 may be deducted from the wages due him, if there are any due, as each monthly assessment becomes payable, and that the monthly assessment will be considered as due on the 20th day of each calendar month.

8. Benefits 1 and 2 are covered by policy no. , issued by The Travelers Insurance Co., Hartford, Connecticut, U.S.A., and are subject to the terms thereof. Benefit 3 is covered by blanket policy no. G.A. 66, issued by The Travelers Indemnity Co. In consideration of the company making the payments necessary to keep these policies in force, the employe assigns policy no. to the company by assignment dated . These policies are open to inspection at the office of the company at all times.

9. It is agreed that neither this contract nor the policies referred to herein shall be hypothecated as security for a loan, or otherwise used to transfer, right, title or interest to a third party.

The Ottawa Electric Railway Co.  
Witness: .....Sec'y, Treasurer.  
.....Employee.

### Electric Railway Notes.

Regina, Sask., ratepayers have defeated a bylaw to provide for the operation of one-man cars on the Regina Municipal Ry. The vote was 428 against and 321 for.

The Toronto Civic Ry., to Aug. 20, had received 14 of the 25 one-man safety cars ordered from Philadelphia, Pa., and it was expected that the balance would be received by the end of August.

The London St. Ry. Co. is reported to have entered an action against the London, Ont., Free Press for allged libel published during the recent fare agitation in the city.

St. Thomas, Ont., Municipal Ry. began the operation of one-man cars Aug. 2.

The Dominion Power & Transmission Co., Hamilton, Ont., advised us recently that it had bought 80 tons of 70 lb. steel rails.

British Columbia Electric Ry.'s head office employes held their fifth annual picnic on Aug. 5, when over 400 left Vancouver in the steamship Rowena for Bowen Island early in the morning, returning in the evening.

The Montreal Tramways Co. put into effect on Aug. 1, on all it slines, a new transfer form which had been in use for about six weeks previously on the St. Catherine St. line. The new form is punched by the conductor to indicate the proper transfer point.

Nova Scotia Tramways & Power Co.'s employes in a recent petition to the Halifax, N.S., City Council claimed that the operation of the daylight saving bylaw was a hardship in regard to the operation of the street cars and asked that the new time be abandoned. The council on Aug. 13 decided to revert to standard time on Aug. 29, two weeks later than the petition asked for, but two weeks earlier than the date named in the bylaw.



# Marine Department

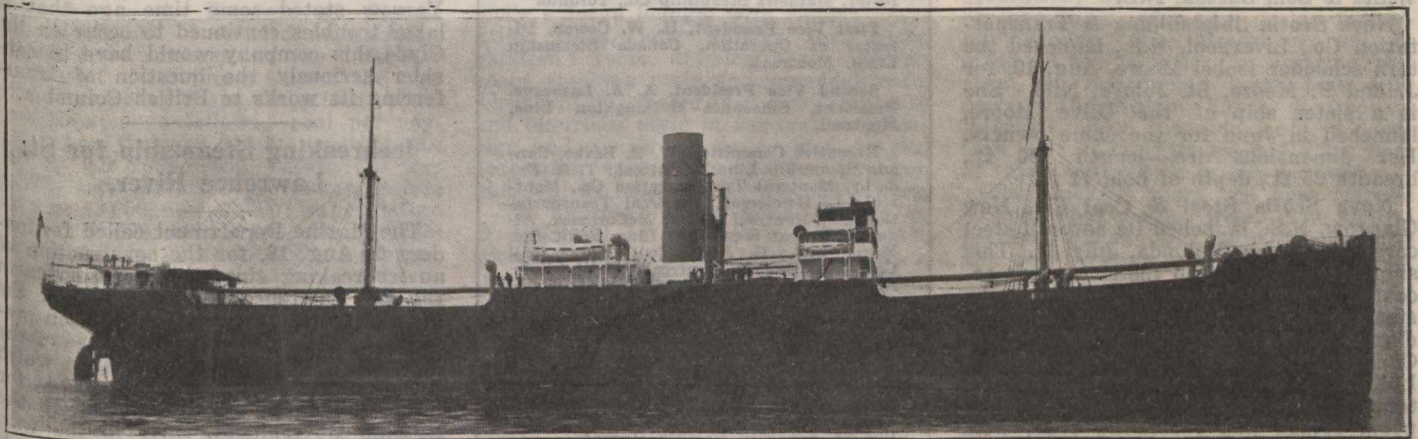
## General Shipbuilding Matters Throughout Canada.

B.C. Yacht & Boat Builders Co., Victoria, B.C., which has a contract from the Marine Department for building two motor boats for the British Columbia coast patrol service at \$62,750 each, has commenced work on them, the keels having been laid early in August. The boats will be 75 ft. long overall, with 17 ft. 8 in. beam, and will be equipped with heavy oil engines of the semi-Diesel type of 100 h.p. by Canadian Fairbanks-Morse Co. The company's plant is at Point Hope on the old Songhees Indian Reserve. The members of the company are returned soldiers and have qualified in boat construction in the vocational training branch of the Department of Soldiers Civil Re-establishment.

Bridgewater Shipping Co., Bridgewater, N.S., launched the tern schooner Hazel L. Myra, Aug. 4. Her dimensions are,—length of keel 90 ft., beam 27 ft., depth

requirements of the Argentine port authorities. The cargo will be carried in 12 tanks, 6 on each side, and at the forward end there will be a small hold for general cargo. This hold will be separated from the oil tanks by a cofferdam, and will be served by a small derrick on each side of the ship. The machinery will be located aft, with a cofferdam, and oil fuel tank and pump room between machinery space and aftermost cargo oil tank. An expansion trunk will run continuously from boiler casing front to fore-castle. Steam heating coils will be fitted in the tanks to facilitate pumping of the heavy crude oil cargo. The crew will be housed in the fore-castle, and officers and engineers in deckhouses aft, at each side of the machinery casings. Peak tanks will be arranged to carry fresh water, and feed water will be carried in a double bottom tank under the engines.

Shipbuilding Co. The consideration for the purchase is as follows:—First mortgage 10-year 5% serial bonds upon the corporation's property of the par value of \$1,950,000, unconditionally guaranteed as to principal and interest by the British Empire Steel Corporation. Seven per cent cumulative preference stock of British Empire Steel Corporation, of the par value of \$1,040,000. Seven per cent cumulative second preference stock of British Empire Steel Corporation, of the par value of \$1,040,000. The Collingwood Shipbuilding Co.'s assets are stated as \$6,500,000. The capital stock is \$2,600,000 and funded debt \$1,950,000. Two plants are operated, one at Collingwood, the other at Kingston. About 1,500 men are employed. The stock has sold recently at about 90.



Steel Cargo Steamship Indus, approximately 8,800 d.w. tons, built for Swedish East Asiatic Co., Gotenburg Sweden, by J. Coughlan & Sons, Vancouver, B.C. for operation in Indian Ocean.

of hold 11 ft. She is equipped with auxiliary power, was built for W. Duff, M.P., Lunenburg, N.S., who will be managing owner, and will engage in trade with the West Indies, Brazil and Europe.

Canadian Vickers Ltd., Montreal.—The contract for repairs to the C.G.S. Montcalm is reported to have been awarded to this company at approximately \$100,000. We have been unable to obtain confirmation of this.

Chester Basin Shipbuilders Ltd., Lunenburg, N.S., launched the tern schooner D. D. McKenzie Aug. 12. She is fitted with the latest coasting equipment, and has the following dimensions,—length overall 130 ft., beam 27 ft., depth of hold 11 ft., tonnage 140 net. She is owned by W. Duff, M.P., and E. C. Adams, Lunenburg, N.S.

Collingwood Shipbuilding Co., Collingwood, Ont., launched the bulk oil steamship Transpet July 27, for the Compania Transportadora de Petreles, Buenos Aires, a subsidiary of the Standard Oil Co. of New Jersey. The christening was performed by Miss Susan Smith, daughter of the President of the International Petroleum Co., Toronto. This is the sixth oil tank steamship built at this yard for the Standard Oil Co. and its subsidiaries, the previous five being larger than the present one. The s.s. Transpet is being built under Lloyd's special survey for the highest class, for river service at Buenos Aires, and has been designed to meet the

The ship will be fully equipped with steam windlass, steam steering gear, electric lighting, refrigerating machinery and cold chamber. The propelling machinery will consist of a set of triple expansion, surface condensing engines, with cylinders 12 $\frac{1}{4}$ , 21 $\frac{1}{2}$  and 35 in. diam. by 24 in. stroke, supplied with steam by a single ended Scotch marine boiler, 11 ft. 8 in. diam. by 10 $\frac{1}{2}$  ft. long, designed for a working pressure of 190 lbs., equipped for oil burning, and all designed for a speed of 8 knots an hour when loaded. The arrangements for handling the oil cargo will be very complete. Two duplex pumps 12 x 9 x 18 in. will be provided, with piping so arranged that the cargo tanks can either be pumped up or out. The main suction lines will be 6 in. with 4 in. branches to each tank. The general dimensions are,—length over all 175 ft. 8 in.; length b.p. 170 ft., breadth moulded 35 ft., depth moulded 10 $\frac{1}{2}$  ft., load draft 8 ft., load, d.w., 625 tons.

At a general meeting of shareholders at Collingwood, at which 95% of the stock was represented, it was unanimously resolved to sell all the Collingwood Shipbuilding Co.'s assets to the Collingwood Shipbuilding Corporation Ltd., which H. B. Smith, President, Collingwood Shipbuilding Co., stated is a subsidiary of the British Empire Steel Corporation. The corporation undertakes to pay all accounts and assume all contracts and agreements of the Collingwood

J. Coughlan & Sons, Vancouver, B.C.

The s.s. Indus, builder's yard no. 16, the launching of which was announced in our last issue, and an illustration of which appears in this issue, was laid down originally for Western Canada Steamships Ltd., a subsidiary of the building company, but was sold later to the Swedish East Asiatic Co., Gotenburg, Sweden, for operation in Indian Ocean service. She was built in 66 $\frac{1}{2}$  days and launched 89 days after the laying of the keel. She underwent her trials in English Bay July 20, averaging 13.56 knots an hour, and as upon her return it was found impossible to obtain fuel oil, it was decided to alter her to burn coal. She has been accepted by J. A. Sturrock on behalf of the owners, and has loaded flour at Puget Sound ports for Alexandria, Egypt. She is of the builder's standard 8,800 d.w. ton type, of steel, with the following dimensions,—length overall 427 ft., breadth moulded 54 ft., depth moulded 29 $\frac{3}{4}$  ft., and is equipped with triple expansion engines, with cylinders 27, 44 and 73 in. diam. by 48 in. stroke.

The keel of a steel cargo steamship of 8,800 d.w. tons, yard no. 19, intended for one of the builder's subsidiary companies, was laid Aug. 2. She will be similar to the s.s. Indus, and will be equipped with triple expansion engines, with boilers fitted for either coal or oil fuel.

Fields, Kirkpatrick & Seaman, Spen-

cers Island, N.S., launched the tern schooner Rupert K, 400 tons register, Aug. 5. She is classed in Bureau Veritas, and fitted with all the latest improvements for ships of this class. She loaded deals at Parrsboro for Europe.

Fraser Brace Shipyards Ltd., Montreal, we are advised, has been awarded the contract for repairs to Canadian Government Merchant Marine's s.s. Canadian Recruit, which stranded on Vache Reef near the mouth of the Saguenay River, Dec. 20, 1919, and which was refloated July 17.

Halifax Shipbuilding Corporation Ltd. has been incorporated under the Dominion Companies Act, with \$100,000 authorized capital and office at Montreal, to build, own and navigate ships operated by steam and other motive power, warehouses, elevators, and other transportation and terminal facilities.

W. R. Huntley & Son, Parrsboro, N.S., launched a four masted schooner, White Belle, towards the end of July. She is 573 tons net and is equipped with gasoline power for hoisting, with two winches for handling cargo. She is classed with Bureau Veritas, and is owned by C. T. White & Son, Sussex, N.B.

Nova Scotia Shipbuilding & Transportation Co., Liverpool, N.S., launched the tern schooner Isobel Moore, Aug. 10, for J. and F. Moore, St. John's, Nfld. She is a sister ship of the Olive Moore, launched in June for the same owners. Her dimensions are,—length 136 ft., breadth 25 ft., depth of hold 11 ft.

Nova Scotia Steel & Coal Co., New Glasgow, N.S., launched its seventh steel cargo steamship Volunda, July 31. This ship has been built on the company's account, and is of the same type as the steamships Canadian Sealer and Canadian Miner, built by the company for Canadian Government Merchant Marine Ltd. She is approximately 2,800 d.w. tons capacity, and is of the single deck, poop, bridge and fore-castle type, with the following general dimensions,—length overall 280 ft., length b.p. 270 ft., breadth moulded 38 ft., depth moulded 20½ ft., draft loaded 17¼ ft. She will be equipped with tri-compound engines, with cylinders 17½, 28¾ and 47 in. diam., 33 in. stroke, 875 i.h.p., supplied with steam by 2 single ended boilers, each 12½ ft. diam. by 10¾ ft. long, at 185 lb. working pressure, and fitted with 2 furnaces, having a grate surface of 80 sq. ft., and a heating surface of 3,000 sq. ft. She will have a sea going speed under full load of about 8½ knots an hour. The company is laying the keel for a similar ship, on its own account, and has also one of the same type under construction, which is understood to be for Canadian Government Merchant Marine, but the contract for which had not been signed up to Aug. 18.

Prince Rupert Drydock & Engineering Co., Prince Rupert, B.C.—W. T. Donnelly, New York, the engineer who designed and built this drydock and plant at Prince Rupert for the Grand Trunk Pacific Ry., visited the yards recently, on behalf of Newman Erb, of New York, and associates, who have a lease of the plant, and it is reported that he has recommended a general development of the yards and the construction of large oil tanks, as the present facilities there are not sufficient to enable the company to extend its business to handle some prospective contracts.

A Winnipeg press dispatch of Aug. 24 credited W. P. Hinton, Vice President and General Manager, Grand Trunk Pa-

cific Ry., with stating that the Prince Rupert Drydock & Engineering Co. had received a contract for building five steel tank steamships and had offers pending for sufficient miscellaneous tonnage to keep the plant running for two or three years, also that arrangements would be made to accommodate from 2,500 to 3,000 men.

Three Rivers Shipyards Ltd., Three Rivers, Que., which is a subsidiary of the National Shipbuilding Corporation of Wilmington, Del., and which has been operated as its Three Rivers Shipyards division, is to be wound up, on the application of a creditor, G. W. Scott, of P. S. Ross & Son, Montreal, having been appointed Provisional Liquidator. The company was formed originally to take over a contract given by the Imperial Munitions Board to T. M. Kirkwood, Toronto, for building 2 wooden steamships of 3,080 d.w. tons each. Before the com-

the land from the B.C. government.

Victoria (B.C.) Shipowners Ltd., Victoria, B.C.—J. W. Spencer, President, and F. B. Pemberton, have resigned from the board of directors, due, it is stated, to differences of opinion on general policy. C. Hoard, Vice President, has been elected President, and H. Shepherd has been appointed Secretary. This company is building four wooden barkentines at Cholberg shipyard, under Dominion Government aid, through loans of \$175,000 for each ship. Three of the keels have been laid, one of them being fully framed. Good progress is reported in connection with the building of these ships, a second payment of \$100,000 having been received from the Dominion Government at the end of July. The square framing on the first ship was completed at the end of July, and the framing on the second ship was reported well advanced.

Yarrows Ltd., Victoria, B.C.—N. A. Yarrow, Manager, who is at present in Great Britain, is reported to be discussing with the management of the parent company, Yarrow & Co. Ltd., Glasgow, the possibility of transferring the Clyde plant to British Columbia. Sir Alfred Yarrow stated some time ago that if labor troubles continued to occur on the Clyde, his company would have to consider seriously the question of transferring its works to British Columbia.

### Icebreaking Steamship for St. Lawrence River.

The Marine Department called for tenders to Aug. 13, for the construction of an icebreaking steamship for service in the St. Lawrence River and Gulf, the plans and specifications having been prepared largely on the lines of those of the icebreaking steamship J. D. Hazen, which was built by Canadian Vickers Ltd., for the Department, but transferred to the Russian Government, early in the war, at the request of the British Government. We have been advised that the tenders received were considered excessive by the Department, and that they were all rejected. The question of calling for new tenders, or postponing further action until Parliament meets, is under consideration.

The general dimensions of the proposed ship are,—length between perpendiculars 275 ft., breadth moulded 57½ ft., depth moulded 32 ft., tonnage, 3,520 gross, indicated horsepower 8,000, speed 16 knots. The estimates for 1920-21 contain an appropriation of \$2,000,000 for building this ship.

A Vancouver press dispatch of Aug. 13, states that Wallace Shipyards Ltd., North Vancouver, B.C., has been advised that its tender for the construction of this steamship was the lowest of those submitted by any firm on the American continent, but that it exceeded the amount of the appropriation. It is stated that the Wallace Shipyards tenders was about \$3,000,000.

The Magog & Newport Steam Navigation Co. Ltd. has been incorporated under the Dominion Companies Act, with \$200,000 authorized capital and office at Montreal, to build, own and operate steam and other ships of every description, and general navigation and transportation facilities, for handling passenger and freight traffic. The incorporators are: J. DeWitt, O. S. Pyndale, H. C. McNeil, O. F. Edwards, Montreal, and H. Pond, Outremont, Que.

### Dominion Marine Association.

President, A. E. Mathews, Managing Director, Mathews Steamship Co., Toronto.

First Vice President, H. W. Cowan, Director of Operation, Canada Steamship Lines, Montreal.

Second Vice President, A. A. Larocque, President, Sincennes - McNaughton Line, Montreal.

Executive Committee, W. E. Burke, Canada Steamship Lines, Montreal; T. R. Enderby, Montreal Transportation Co., Montreal; L. Henderson, Montreal Transportation Co., Montreal; W. J. McCormack, Algoma Central Steamship Line, Sault Ste. Marie, Ont.; G. J. Madden, George Hall Coal Co. of Canada, Montreal; E. W. Oliver, Niagara, St. Catharines & Toronto Navigation Co., Toronto; W. H. Smith, Ontario Car Ferry Co., Montreal; J. F. Sowards, Sowards Coal Co., Kingston, Ont.; J. F. M. Stewart, Point Anne Quarries Ltd., Toronto; Jno. Waller, Keystone Transportation Co., Montreal; Lorne C. Webster, Webster Steamship Co., Montreal; J. Wilkie, Imperial Oil Ltd., Toronto; A. A. Wright, honorary member, Toronto.

General Counsel, Francis King, M.A., Kingston, Ont.

Official Organ, Canadian Railway and Marine World, Toronto.

pletion of these contracts, the plant was sold to the National Shipbuilding Corporation and contracts for wooden steamships were carried out for the French Government and the yard was remodelled to build steel steamships.

Wallace Shipyards Ltd., North Vancouver, B.C.—It is reported that the C. P.R. has ordered a steamship from this company for its B.C. Coast Service, to replace the s.s. Princess Sophia, which was lost with her passengers and crew on the Vanderbilt Reef in the Portland Canal Oct. 24, 1918. The new ship has, it is said, been specially designed for the Alaska service, and will be 325 ft. long, with a speed of 17 knots. The contract price is stated to be about \$1,500,000.

Victoria, B.C.—Capt. A. Berquist, a local owner and builder of steam tugs, is reported to have bought the Point Ellice yard, operated formerly by the Foundation Co. of British Columbia, Ltd. The plant as it stands is valued at \$25,000, and consists of 4 building ways, 2 overhead gantrys, some electrically driven machinery and general shipbuilding plant and buildings. It is said that the new owner contemplates building tugs and barges as soon as his plans are completed, and he has arranged a lease of

## Canadian Pacific Ocean Services' s.s. Empress of Canada Launched.

The s.s. Empress of Canada, which is being built at Glasgow, Scotland, for Canadian Pacific Ocean Services' Pacific service, was launched Aug. 17, the ceremony being performed by Mrs. G. M. Bosworth, of Montreal, wife of the Chairman of the managing company. On completion of the ship in March, 1921, she will sail from Liverpool, Eng., for Vancouver, B.C., via the Suez Canal, on a round-the-world trip, details of which, together with some particulars of the ship, were given in our last issue.

Sir Thomas Fisher, K.B.E., General Manager, Atlantic Lines, C.P.O.S., London, Eng., is reported to have stated in a speech following the launching regarding prospects of steamship service on the Atlantic, that unless there is some cessation in the continually rising costs, British shipyards may find themselves without orders, and that under present conditions it would be absolutely unthinkable to lay down another ship to-day like the Empress of Canada. Before the war, Atlantic steamships cost \$550,000, whereas the Empress of Canada cost \$1,700,000. Increased maintenance is still more serious, and the difference in the cost of running a ship of the type of the company's s.s. Calgarian, could be estimated as follows,—coal per voyage before the war \$4,500, now \$24,000; repairs per round trip, before the war \$7,700, now \$17,000; provisions, before the war \$3,000, now \$8,000; wages before the war \$2,500, now \$9,000. Apart from the cost of the improved accommodation, etc., the total increases for the round trip approximate \$60,000, and the increase in passenger rates is only 185%, against the cost increase of 850%. This, he claimed, could not continue very long, a number of first class ships would necessarily be laid up and he could not conceive of anything worse for the Empire than charging such immense sums. The rising of Atlantic rates would seriously impede communication between different parts of the empire, which, he claimed, if not stopped, would mean empire disintegration. He urged economy in shipbuilding, by better organization, and suggested that standardization might possibly give some reduction in costs. One principal economy in operation, he stated, would be to reduce speed by four knots an hour, and he believed that oil burners as at present utilized on some steamships, would be followed in about five years by internal combustion engines, which, he claimed, would about halve the cost of fuel and bring matters nearer to the pre-war position.

The ship has an overall length of 653 ft., is 77¼ ft. wide and 53½ ft. deep to the bridge deck. She has a straight stem and cruiser stern, and will have 3 funnels and 2 pole masts and will be rigged as a fore and aft schooner. There will be a continuous shelter deck with bridge, promenade and boat decks over, the former extending for the full length of the ship; two complete 'tween decks and lower Orlop 'tween decks at fore and aft ends. She will have a gross tonnage of about 20,000 tons and will be arranged to carry about 490 first class, 106 second class, 238 third class and 932 Asiatic steerage passengers and 547 of a crew. Of the cargo spaces a large portion will be fitted for the carriage of silk and refrigerated cargo. The deadweight will be 9,500 tons and the ocean speed not less than 18 knots. The ship is built to the highest class of Lloyd's register, to

full Board of Trade requirements, and will be subdivided in full accordance with the requirements of the Bulkhead Convention.

The first class accommodation will be arranged on the shelter deck, in 2, 3 and 4 berth rooms, and on the bridge deck in 1, 2 and 3 berth rooms, also in a number of special rooms and private suites, comprising sitting rooms, bedrooms and bathrooms. The staterooms will be fitted up with the latest type of open wash basin, having a supply of hot and cold fresh water. The public lavatories and bathrooms will be fitted up with the most modern improvements in sanitary fittings. The dining saloon will be on the upper deck and will accommodate 307 persons; there will be a large reception room forward of the dining saloon, with a passenger elevator at its fore end; and on this deck there will also be a large swimming bath and gymnasium with dressing rooms and other auxiliaries. The remaining public rooms will be on the promenade deck and will include a large lounge, with cinema operating room, long gallery, card room, children's room, drawing room, writing room, smoking room and venandah cafe. They will be treated in a most elaborate and luxurious style in the matter of design and comfort. Long promenades and recreation spaces for games, dancing, etc., will be reserved for the passengers.

The approach to the dining saloon on D deck will be through the first class reception room, which is designed as a large open space suitable for dancing, with a floor space of over 300 superficial feet, and with arched recesses at the sides fitted with fixed seatings and a space for the orchestra. It will be panelled throughout in large painted panels, of a light grey tone with mouldings picked out in white. In the central portion there will be large arch-headed mirrors at the aft end, with jardinières for flowers at their feet, and on the for'ard end a handsome wrought iron lift enclosure.

The first class dining saloon will be approached from the reception room through two auxiliary dining rooms, which will also serve as supper rooms on the occasion of dances in the reception rooms. It will be capable of seating 325 people. The seating will be arranged to provide separate tables for parties of 6, in recesses at the ship's sides, and 24 other tables seating 4 each, adjoining the main gangways, reserving the long tables for the central portion of the room. The central portion will be carried up to the height of two decks, the upper portion being arcaded in treatment, open at one side to a gallery, and on the other side glazed with semi-circular mirrors. At the forward end will be the musicians' gallery, with a handsome wrought iron balustrade, and at the after end will be a fine carved mahogany sideboard. The whole motive of the central portion is designed to give a great appearance of height. The general scheme of this room will be Georgian in character, with large painted panels of a similar color scheme to the reception room, and with mirrors between these panels, which will add to the light of the room.

The general design of the main stairway follows closely that of the reception room. It will be fitted with fine wrought iron lift enclosures and balustrades at each deck level. On the prom-

enade deck it will open into the long gallery, which will be made a feature of the ship, as it will give access to all the principal first class rooms. It will be 13 ft. wide and 110 ft. long. It will be panelled in polished Honduras mahogany, and the sides will be hung with choice prints and will be amply lighted from the ship's side.

At the forward end of the lounge gallery will be the first class lounge gallery. This room has been planned with a view to providing a large open central space, raised about 4½ ft. in height above the rest of the room and it will be lighted by clerestory windows, by a handsome wrought iron lay light. It will be utilized as a music room, and also for cinema exhibitions. The central portion will be divided from the outer portions by arches supported by columns. The remainder of the room, which will be at the lower level, will be arranged with a view to providing for card parties. The keynote of this design is the wall decoration, which will consist of large brocade panels of a rich design in walnut framing. The utmost use will be made of the facilities for lighting this room, by introducing large teak windows, with transom lights, at frequent intervals along the side, and by large teak bays at the forward end. The floor of this room will be in oak parquet.

The smoking room has been planned on somewhat similar lines. The central portion in itself will constitute a large and well lit room, while the portions towards the sides of the ship will be adapted with a view to the accommodation of card parties. The room will be panelled in large oak panels, sub-divided with carved Ionic columns. At the sides of the ship there will be 3-light mullioned and transomed windows. The features of this room will be the fireplace at the after end with its large canopied pediment, under which will be a carved Canadian coat of arms, and at the forward end will be the handsome central doorway surmounted by a carved and quilt Sunray clock.

The first class card room's walls will be panelled throughout in grey sycamore panels, with large fielded and belection moulded panels, and with a fine carved cornice and bold dado skirting mouldings.

The first class drawing room main feature will be the decoration of the panels above the dado, which will be in specially selected printed linen, with curtains and upholstery to match. The framing of these panels at intervals will be carved and gilt mirrors, and over the fireplace a painted flower picture. All the panelling and dado panelling will be painted in mahogany in soft tints.

The second class accommodation will be arranged on the shelter deck aft, in 2 and 4 berth rooms. The state rooms will be fitted up similar to the first class. The dining saloon will be on the upper deck, and will accommodate 100 persons and there will be a lounge on the bridge deck aft.

The third class (permanent and portable) will be arranged on the upper and main decks in large 2, 4 and 6 berth rooms. The dining saloon will be on the upper deck and will accommodate 100 persons. The Asiatic steerage will be arranged in compartments, on the main, upper and shelter decks, in open berths. Large and airy rooms will be arranged for officers and crew.

Miscellaneous.—The ship will be fully equipped with a large laundry, dispensary, hospitals, dark rooms, etc., also store rooms and insulated chambers for cold storage of provisions, and the kitchen and pantry arrangements will be such as will ensure efficient and rapid service.

Throughout the ship special attention will be given to the fact that she is to serve in a semi-tropical climate; the public rooms will therefore be large and airy and the ventilation amply and sufficiently arranged. A feature of the ship will be the elaborate system of mechanical ventilation fitted throughout. All the first and second class accommodation and public rooms, except dining saloons, will be heated by steam radiators, and ventilated by electric exhausting fans. All dining saloons and third class accommodation will be heated and ventilated on the thermo tank hot air system. All supply and exhaust fans will be capable of changing the air, in the compartments to which they are connected, a sufficient number of times per hour to guarantee a continuous supply of pure air. All thermo tanks and supply fans will have a disinfecting apparatus, fitted to ensure purity of air. Electric radiators will be fitted in first and second class state rooms.

The ship will be equipped with three sets of main electric generators, turbine driven, for lighting and for operating the various fans and auxiliary appliances, and in addition an emergency electric plant, driven by an oil engine, will be installed on the boat deck, for service if the main plant is not available. Wireless telegraphy plant, submarine signaling apparatus and a Sperry gyro compass will be part of the equipment.

Refrigerating plant will be installed

for cargo and provision chambers.

The 'tween decks will be sub-divided by special bulkheads, to prevent the spread of fire. There will also be a considerable number of chemical fire extinguishers fitted throughout the passenger accommodations. A complete system of automatic fire alarms will be fitted throughout, also a system of telephones, with a central exchange to the special and suite rooms and various offices, etc. For fire extinguishing in the cargo holds, etc., steam and water will be carried through various compartments.

Machinery, Etc.—The ship will be propelled by 2 sets of Brown-Curtiss turbines, driving twin screws through double reduction gearing. Each set of turbines will be divided into units, working in series. The high pressure and low pressure turbines will be coupled together in tandem, and will drive the outboard first reduction pinions of gearing, and the first intermediate and second intermediate pressure turbines will be similarly coupled, and drive the inboard first reduction pinions. For astern working, a high pressure turbine will be incorporated in the same casing as the second intermediate pressure ahead turbine, and a low pressure astern turbine will be incorporated in the same casing with the low pressure ahead turbine. The propelling machinery will be the largest installation of double reduction gearing which has, so far, been constructed.

The boiler installation will comprise 8 double ended, and 4 single ended cylindrical return-tube boilers, arranged in 2 separate boiler compartments, and designed to burn oil fuel in combination with the Howden system of forced draft. There will be a complete duplicate system, in each boiler room, of oil

fuel pumps, heaters and fittings for supplying oil to the furnaces, and provision will be made for readily converting the boilers, so that they may burn coal at a later date if required.

The installation of auxiliary machinery will be of the most modern type, designed specially to economize consumption of steam for propelling purposes, and also to suit the requirements of the high class passenger service in which the ship will be engaged. The steam steering gear, manoeuvring and warping machinery will be of the latest types.

The cargo equipment will be of the most recent type, the cargo derricks on the masts and derrick posts being operated by 12 powerful electrical winches.

The lifeboats will have capacity for all on board and will be operated by Babcock & Wilcox patent Wylie davits, Welins quadrant davits, and electric boat winches. The doors on the watertight bulkheads will be operated by Brunton Bros. hydraulic system and will be controlled from the navigating bridge.

The oil fuel bunkers will have a normal capacity for 4,500 tons of oil; in emergencies many of the double bottom rooms may also be utilized for the carriage of oil, so that the fuel supply can be increased to about 6,400 tons, sufficient to carry the ship over 14,000 miles.

The Bear River Steamship Co. Ltd. has been incorporated under the Dominion Companies Act, with \$150,000 authorized capital and office at Bear River, N. S., to own and operate steam and other ships, and to carry on a general ship-owning and transportation business. The incorporators are,—R. S. Robertson, J. W. Pickup, Jas. Aitchison, L. Kert, and D. A. McCrimmon, all of Toronto.

Ships Registered in Canada During May, 1920.

In compiling the following lists of vessels registered, steamboats and motor boats, operated by engines of less than 10 n.h.p., are eliminated, as also are sailing ships of less than 100 tons register.

STEAM.

No.	Name	Port of Registry	Where and when built	Length	Breadth	Depth	Gross Tons	Reg. Tons	Engines, Etc. N.h.p.	Owners or managing owners
141592	Canadian Beaver*	Montreal	Kingston, Ont. 1920	251.0	43.6	23.6	2410	1451	124 Sc.	Minister of Marine and Fisheries, Ottawa.
141705	Canadian Inventor*	Vancouver, B.C.	Vancouver, B.C. 1920	400.1	52.4	28.8	5497	3384	266½ Sc.	Minister of Marine and Fisheries, Ottawa.
141710	Chilkoot	Vancouver, B.C.	North Vancouver, B.C. 1919	172.6	30.2	12.9	756	411	95 2/3 Sc.	Union Steamship Co. of British Columbia, Vancouver, B.C.
133799	Dimmie John	Port Stanley, Ont.	Port Stanley, Ont. 1920	69.0	16.6	6.0	50	34	10½ Sc.	H. F. Woolatt, M.O., Port Stanley, Ont.
141599	Jeannette R. (1)	Montreal	Buffalo, N.Y. 1888	113.1	20.9	5.7	144	56	33 Sc.	Sincennes McNaughton Line, Ltd., Montreal.
141752	Maplegulf (2)	Montreal	Marine City, Mich. 1889	175.1	32.4	13.0	821	493	80½ Sc.	T. R. Enderby, Montreal.
141259	Majorie V.	Yarmouth, N.S.	Wedgeport, N.S. 1920	68.6	18.0	6.7	61	38	13 Sc.	D. D. LeBlanc, Wedgeport, N.S.
115953	Princess Victoria*	Victoria, B.C.	Wallsend-on-Tyne, Eng. 1903	300.0	40.5	15.4	1943	785	800 Sc.	Canadian Pacific Ry. Co., Montreal.
141662	T. L. Church	Toronto	Toronto 1920	231.0	43.6	20.7	2264	1353	147 Sc.	Dominion Shipbuilding & Repair Co., Toronto.
141456	Two Roses	Halifax, N.S.	Sorel, Que. 1917	84.0	19.2	10.0	113	14	24 Sc.	T. M. Kirkwood, Montreal.

(1) Formerly New Island Wanderer.  
 (2) Formerly Pawnee.  
 \* Equipped with wireless.

SAILING.

No.	Name	Port of Registry	Rig	Where and when built	Length	Breadth	Depth	Gross Tons	Tons Reg.	Owner or Managing Owner.
141609	Berquist No. 1	Victoria, B.C.	Scow	Ladner, B.C. 1911	81.2	26.2	6.5	116	116	A. Berquist, Vancouver, B.C.
141688	Donald T.	Lunenburg, N.S.	Schr.	Daysprings, N.S. 1920	116.4	26.3	11.4	175	163	W. Duff, Lunenburg, N.S.
141687	Giant King	Lunenburg, N.S.	"	La Have, N.S. 1920	127.4	27.6	11.0	198	135	B. Himmelman, M.O., Rose Bay, N.S.
141538	J. T. M. No. 1	New Westminster	Scow	Steveston, B.C. 1920	57.3	24.0	6.0	99	99	H. M. Margetts, Steveston, B.C.
141753	J. R. Edwards	Montreal	Barge	Marine City, Mich. 1883	175.8	30.5	10.0	453	422	T. R. Enderby, Montreal.
141690	Joyce M. Smith	Lunenburg, N.S.	Schr.	Salmon River, N.S. 1920	122.5	26.0	11.0	173	113	W. C. Smith, M.O., Lunenburg, N.S.
141754	Minnie E. Orton	Montreal	Barge	Marine City, Mich. 1884	178.6	30.8	10.2	456	424	T. R. Enderby, Montreal.
141463	Nellie T. Walters	Shelburne, N.S.	Schr.	Shelburne, N.S. 1920	113.4	26.0	10.5	175	139	R. T. Sainthill, North Sydney, N.S.
141689	Pauline B. Mosher	Lunenburg, N.S.	"	Yarmouth, N.S. 1920	118.6	27.5	12.4	177	177	C. Iverson, M.O., Lunenburg, N.S.
141719	R. P. 2	Vancouver, B.C.	"	Vancouver, B.C. 1920	80.0	30.0	7.1	147	147	Rat Portage Lumber Co., St. Boniface, Man.
141720	R. P. L. III	Vancouver, B.C.	Scow	" 1920	80.0	30.0	7.1	147	147	Rat Portage Lumber Co., St. Boniface, Man.
141638	Retraction	La Have, N.S.	Schr.	Conquerall Bank, N.S. 1920	119.0	26.0	11.0	183	148	J. N. Rafuse & Sons, Conquerall Bank, N.S.

## Canadian Government, Merchant Marine Ltd., Shipbuilding, Operation, Etc.

**Launching of Steamships.**—Since Canadian Railway and Marine World for August was issued we have been advised of the following launchings of steel cargo steamships for Canadian Government Merchant Marine.

July 20 and 26, s.s. Canadian Squatter, Marine Department contract 45; builder's yard no. 5; approximately 4,575 d.w. tons, British American Shipbuilding Co., Welland, Ont. The aft section was launched July 20, and the forward section July 26, both sections being towed to Montreal, where they will be joined together.

July 27, s.s. Canadian Conqueror; Marine Department contract 51; builder's yard no. 78; approximately 8,390 d.w. tons, Canadian Vickers Ltd., Montreal.

Aug. 14, s.s. Canadian Fisher, Marine Department contract 15; builder's yard no. 7; approximately 5,100 d.w. tons,

cargo at Sydney, N.S., for Liverpool, Eng.

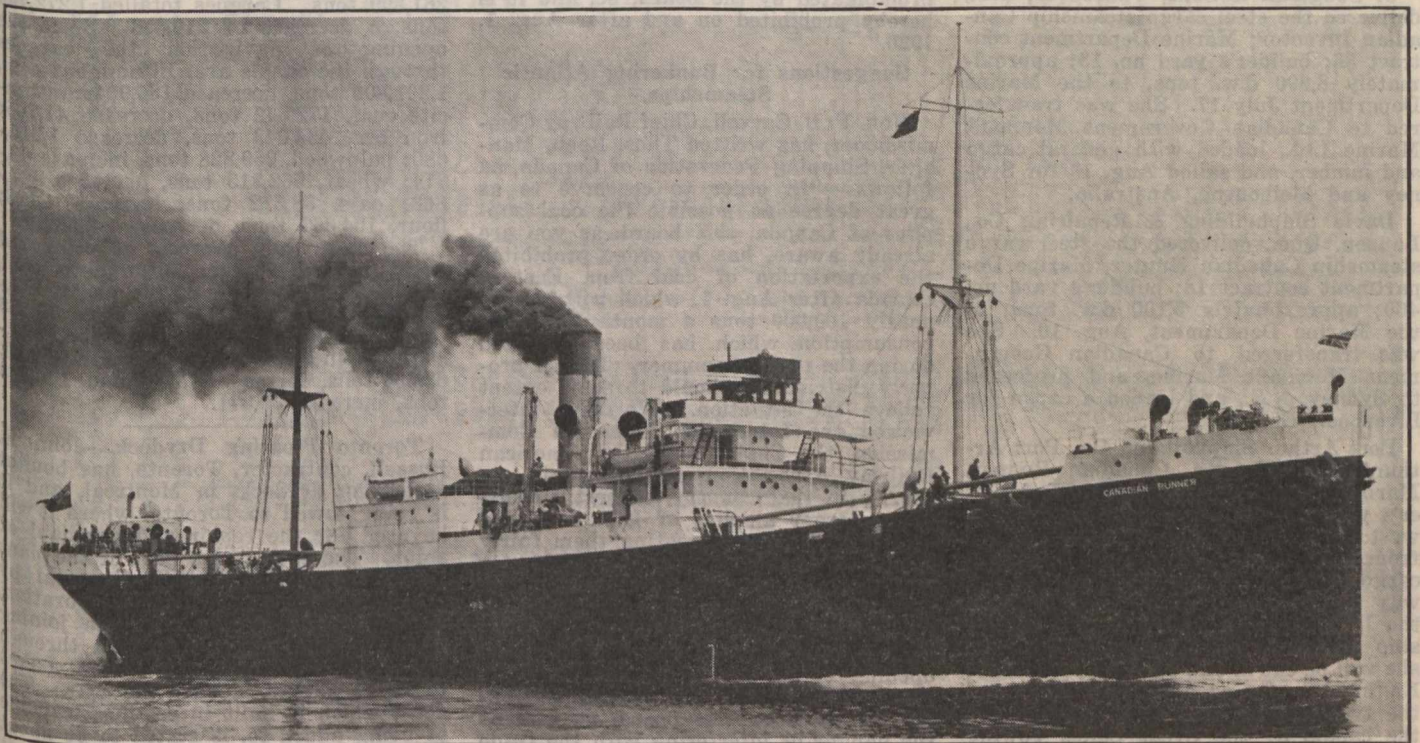
**Names of Steamships.**—The name chosen for the steel cargo steamship being built under Marine Department contract 54, by Midland Shipbuilding Co., Midland, Ont.; builder's yard no. 10; approximately 3,890 d.w. tons; for Canadian Government Merchant Marine Ltd. has been changed from Canadian Racer to Canadian Logger.

We were officially advised on Aug. 20 that while the contract to be numbered 59, for building a steel cargo steamship by the Nova Scotia Steel & Coal Co., builder's yard no. 8, approximately 2,800 d.w. tons, had not been signed, the name Canadian Sapper has been selected, in the event of the contract being awarded. The keel for this ship was laid May 4.

**Oil Fuel Equipment.**—We are officially advised that oil fuel equipment will be provided on the following ships being

ger service with the West Indies is to be operated successfully, the ships will have to be of a class to compete on even terms with those sailing from New York.

**Refrigeration Equipment.**—We are officially advised that refrigerator equipment will be fitted in the following ships now building for Canadian Government Merchant Marine Ltd., viz., Canadian Winner and Canadian Traveller, by Harbour Marine Co., Victoria, B.C.; Canadian Exporter, Canadian Inventor and Canadian Prospector, by J. Coughlan & Sons, Vancouver, B.C.; Canadian Cruiser and Canadian Constructor, by Halifax Shipyards Ltd., Halifax, N.S.; Canadian Victor, Canadian Conqueror, Canadian Commander, and Canadian Leader, by Canadian Vickers Ltd., Montreal; Canadian Highlander and Canadian Skirmisher, by Wallace Shipyards Ltd., North Vancouver, B.C.



Steel Cargo Steamship Canadian Runner, approximately 4,350 d.w. tons, built for Canadian Government Merchant Marine Ltd., by Port Arthur Shipbuilding Co., Port Arthur, Ont.

Tidewater Shipbuilders Ltd., Three Rivers, Que.

**Deliveries of Steamships.**—In addition to the steamships mentioned in Canadian Railway and Marine World previously, the following deliveries have been made to Canadian Government Merchant Marine Ltd.:—

July 17, s.s. Canadian Inventor, Marine Department contract 36; builder's yard no. 13; approximately 8,390 d.w. tons; J. Coughlan & Sons, Vancouver, B.C. This ship loaded general cargo and lumber and sailed from Vancouver, Aug. 13, for Sydney and Melbourne, Australia.

July 18, s.s. Canadian Otter; Marine Department contract 44; builder's yard no. 4; approximately 4,575 d.w. tons; British American Shipbuilding Co., Welland, Ont. This ship loaded a general cargo at Montreal and sailed Aug. 20 for Barbados, Trinidad and Demerara.

Aug. 10, s.s. Canadian Hunter, Marine Department contract 18; builder's yard no. 460; approximately 5,100 d.w. tons; Davie Shipbuilding & Repairing Co., Lauzon, Que. This ship loaded a

built for Canadian Government Merchant Marine Ltd., viz.: Canadian Highlander and Canadian Skirmisher, Wallace Shipyards Ltd., North Vancouver, B.C.; Canadian Challenger, Davie Shipbuilding & Repair Co., Lauzon, Que.; Canadian Transporter and Canadian Freighter, J. Coughlan & Sons, Vancouver, B.C.

**Passenger Accommodation for Trade with West Indies.**—The question of providing some passenger accommodation, on some of the steel cargo steamships being built for Canadian Government Merchant Marine, to be used in the West Indian service has been under the Marine Department's consideration, and it has been decided to make the changes necessary in the two ships being built by Tidewater Shipbuilders Ltd., Three Rivers, Que., viz., Canadian Fisher, and Canadian Forrester, each approximately 5,100 d.w. tons, and similar changes in other ships are being considered. This, however, can only be a temporary expedient, as these ships will have a speed of only 11 knots, which is not sufficient for passenger business, and if a passen-

**Officers of Steamships.**—The following masters have been appointed to steamships by Canadian Government Merchant Marine Ltd., since those mentioned in our last issue:—Canadian Miner, Capt. A. Blouin, vice Capt. M. Fraser, resigned; Canadian Otter, Capt. J. McFadyen; Canadian Victor, Capt. M. Robertson; Canadian Volunteer, Capt. C. R. Bissett. Chief engineers have been appointed as follows:—Canadian Conqueror, J. J. Pringle; Canadian Spinner, W. Humphreys.

The s.s. Canadian Inventor, which loaded lumber at Chemainus, B.C., towards the end of July, for Australia, is expected back at Vancouver about Nov. 1, when she will inaugurate the Canadian Government Merchant Marine service to India and other Oriental ports. It is stated that capacity cargo for this ship has already been booked for Shanghai, Hong Kong, Singapore, Calcutta, etc.

British American Shipbuilding Co., Welland, Ont., advised us Aug. 18 that the s.s. Canadian Otter; Marine Department contract 44; builder's yard no. 4;

approximately 4,575 d.w. tons; which was launched at Welland in two sections, and towed to Montreal, had been joined together at Canadian Vickers Ltd. plant, and had been delivered to the Marine Department. She subsequently loaded a general cargo at Montreal and sailed Aug. 20 for Barbados, Trinidad and Demerara.

British American Shipbuilding Co. launched the s.s. Canadian Squatter; Marine Department contract 45; builder's yard no. 5; approximately 4,575 d.w. tons, in two sections, the aft section on July 20, and the forward section on July 26. The two sections will probably leave Welland, in tow, about Sept. 15, for Montreal, where they will be joined together at Canadian Vickers Ltd. plant.

Canadian Vickers Ltd., Montreal, launched the steel cargo steamship Canadian Conqueror; Marine Department contract 51; builder's yard no. 78; approximately 8,390 d.w. tons, for Canadian Government Merchant Marine, July 27.

J. Coughlan & Sons, Vancouver, B.C., delivered the steel cargo steamship Canadian Inventor; Marine Department contract 36; builder's yard no. 13; approximately 8,390 d.w. tons, to the Marine Department July 17. She was transferred to Canadian Government Merchant Marine Ltd., loaded with general cargo and lumber, and sailed Aug. 13 for Sydney and Melbourne, Australia.

Davie Shipbuilding & Repairing Co., Lauzon, Que., delivered the steel cargo steamship Canadian Hunter, Marine Department contract 18; builder's yard no. 460; approximately 5,100 d.w. tons; to the Marine Department, Aug. 10. She was transferred to Canadian Government Merchant Marine, and proceeded to Sydney, N.S., and loaded a cargo for Liverpool, Eng.

Port Arthur Shipbuilding Co., Port Arthur, Ont.—The s.s. Canadian Runner, Marine Department contract 32; builder's yard no. 43; approximately 4,350 d.w. tons, built by this company, sailed from Port Arthur, Ont., Aug. 8, with a cargo of grain for Port Colborne, on her way to the ocean. She is stated to be the largest ocean going freight steamship ever built on the Great Lakes and she will be cut in two by the Great Lakes Engineering Co. at Ashtabula, Ohio, and the two sections will be towed through the canals by the Great Lakes Towing Co., to Montreal, where the sections will be rejoined by Canadian Vickers Ltd., after which she will be operated on the West Indies route. Her keel was laid Aug. 29, 1919, and she was launched May 8, 1920. Her dimensions are,—length overall 333 ft. 7 in., length b.p. 319 ft. 10½ in., breadth moulded 43 ft. 10 in., depth moulded 25 ft. She is of the two deck, poop, bridge and fore-castle type with 'tween decks, and is equipped with triple expansion condensing engines of 1,900 h.p., supplied with steam by two Scotch boilers, each 15 ft. dia. by 11 ft. long, under forced draft. Her propellers are of bronze, and on her trial trip she developed a speed of 12 knots an hour.

Tidewater Shipbuilders Ltd., Three Rivers, Que., launched the steel cargo steamship Canadian Fisher, Marine Department contract 15; builder's yard no. 7; approximately 5,100 d.w. tons, on Aug. 14. The upper structures of this ship, and of the s.s. Canadian Forrester; Marine Department contract 16; builder's yard no. 8; approximately 5,100 d.w. tons, are to be changed, so as to provide for carrying a limited number of passengers between Canada and the West Indies.

### Coal Exportation Prohibited and Rules for Bunkering Atlantic Steamships Suggested.

Under authority of an act passed by the Dominion Parliament at its last session, and which was published in full in Canadian Railway and Marine World for August, pg. 431, the Board of Railway Commissioners passed general order 301, July 22, as follows:—"In the matter of the question of the coal supply in Canada, and the powers conferred upon the board by chap. 66 of the acts of the Parliament, 1920: Upon its appearing to the board that there is a real or apprehended scarcity of coal, with a view to conserving the supply, and in pursuance of the powers conferred by the said act, the board doth order that the exportation of coal from the Atlantic, St. Lawrence River and Gulf ports of Canada, except to the United States or to Newfoundland, unless otherwise permitted, and in accordance with regulations to be promulgated by the board, be, and it is hereby prohibited on and after Aug. 1, 1920."

#### Suggestions for Bunkering Atlantic Steamships.

Hon. F. B. Carvell, Chief Railway Commissioner, has written Thos. Robb, Manager, Shipping Federation of Canada, as follows:—"In order to conserve to as great degree as possible the coal supplies of Canada, this board, as you are already aware, has by order prohibited the exportation of coal from Eastern Canada after Aug. 1, which will release nearly 100,000 tons a month for home consumption which has been exported during the present summer. This, if properly distributed, should to some extent relieve the situation. We have interviewed the Interstate Commerce Commission, the Chairman of the American Railway Association, and others in authority in that country, earnestly desiring a larger amount of U.S. coal, and do not feel we are treating them fairly in allowing coal imported presumably for our domestic purposes to be used for bunkering ships not only across the Atlantic, but for the return voyage, as has been a very common practice since the opening of navigation on the St. Lawrence. While realizing the responsibility resting upon this board, as well as the danger of interfering with the trade routes of the country, we have decided for the present not to issue positive orders, but to express to you our wishes re the bunkering of coal as follows:—

"That passenger and freight liners for United Kingdom ports running on schedule may be bunkered at Montreal.

"That passenger and freight liners to French Atlantic ports may be bunkered to destination and thence to a United Kingdom port only, unless it be a liner returning direct to Canada, when it may receive sufficient bunkering to bring it back to Canada.

"That tramp steamships should be allowed only sufficient coal at Montreal or Quebec to carry them to Sydney, and at that point should receive sufficient coal to take them to destination, and, if bound to the Mediterranean, sufficient to bring them back to Gibraltar.

"That all vessels for South Africa, South America, the West Indies, Australia and New Zealand must be bunkered at Sydney, N.S., where they will be provided with sufficient coal for a return or to first coal port, excepting vessels loading at Montreal or other Canadian port requiring surplus bunkers stowed under

cargo, this to be supplied at the loading port.

"That all vessels leaving a United Kingdom port should, whenever possible, obtain sufficient coal for the voyage to Canada and return."

It is reported from Sydney, N.S., that 23 ocean steamships, which were waiting in port, in the hope that the prohibition against the exportation of coal to Europe, would be removed or modified, sailed for other ports Aug. 16. One, the s.s. Lord Dufferin, which, it is stated, had about 7,000 tons of coal on board at the time the prohibition went into effect, was allowed to leave for Holland.

### Canal Traffic Statistics.

Figures issued by the Dominion Bureau of Statistics show a falling off in traffic through Canadian canals in July. The total number of vessels through all canals was 4,969, with 1,971,193 net tonnage, a decrease from July, 1919, of 261,399 tons. Cargoes totalled 1,272,746 tons, a decrease of 210,378. Since the opening of navigation the cargoes through the canals are: Bituminous coal, 1,201,806 tons, decrease 136,954; anthracite coal, 172,542 tons, decrease 41,785; iron ore, 464,043 tons, decrease 1,214,680; pulpwood, 259,823 tons, increase 62,814; wheat, 562,815 tons, decrease 327,368; oats, 88,312 tons, increase 1,128; flour, 104,367 tons, decrease 60,323.

The main July cargoes, as compared with July, 1919, are: Bituminous coal, 489,423 tons, decrease 6,376; wheat, 127,000 tons, decrease 1,738; iron ore, 79,768 tons, decrease 123,816; pulpwood, 124,835 tons, increase 15,177; anthracite coal, 68,534 tons, decrease 6,732; sand, 106,348 tons, increase 36,371.

**Toronto Floating Drydock.**—John E. Russell, contractor, Toronto, has bought a floating drydock, in Montreal, and it is being towed to Toronto, where it will be used for the repair and overhaul of ships. The dock was a part of the plant which was established in Montreal by the U.S. Emergency Fleet Corporation, for use in connection with the joining of U.S. ships which were sent through the Welland Canal from the Great Lakes to the seaboard, during the war. The dock, which is built in sections, capable of being added to, is stated to be about 300 ft. long, and it is probable that it will be acquired by the Toronto Dry Dock Co., which, in 1917, bought a floating drydock about 160 ft. long, at Sturgeon Bay, Wis., with which it may be incorporated, thus giving sufficient dock capacity for handling the larger ships trading on the lakes. The Toronto Dry Dock Co. was incorporated under the Ontario Companies Act in 1917, the incorporators being C. S. Boone, President; J. E. Russell, Vice President and Managing Director; L. Solman, Manager, Toronto Ferry Co., J. J. Manley, and H. Dickson.

**Vaccination of Steamship Passengers.** Quebec press dispatch.—Steamship officials are disturbed over orders issued by the Immigration Department that no passengers on ocean liners, whether saloon, second cabin or third class, be permitted to land at Canadian ports before being vaccinated, unless they can give proof that they have been vaccinated within the required time. They point out that the ruling is absurd, since passengers can land at any point in the United States and enter Canada by rail without being vaccinated.

### Orders for Steel Cargo Steamships for Canadian Government Merchant Marine Ltd.

The following is a complete list of steel cargo steamships which the Dominion Marine Department has been authorized, by order in council, to place orders for, and which orders are to be carried out. The figures given in the column headed "Long tons d.w." and which are preceded by an asterisk (\*) show the total deadweight capacities as determined after the ships have been completed. The other figures in that column, not preceded by an asterisk, show the approximate total deadweights, subject to modification as they may vary above or below the figures given and as may be ascertained after the ships are completed, and of course, the total prices will vary accordingly.

Where the total price does not agree with the finally ascertained deadweight tons multiplied by the price per ton, the extra amount is for changes from specifications, additional equipment, accommodation, etc.

The following contractions are used in the column giving the type of the vessels to be built: s.d., single deck; 2.d., two deck; 3.d., three deck; lake, lake type; p. poop; b. bridge; f'c's'le, fore-castle.

Contract	Contract date	Name	Builder	Yard no.	Long tons d.w.	Price per ton d.w.	Total price	Type	Classification	Speed knots	Keel laid	Launched	Delivered.
1	Mar. 4, 1918	Canadian Voyageur	Canadian Vickers Ltd.	66	*4,575	\$207.	\$ 947,025	S.d., p., b. and f'c's'le.	Lloyd's	11	June 11, 1918	Nov. 23, 1918	Feb. 22, 1919
2	May 22, 1918	Canadian Pioneer	"	67	*8,408	180.	1,513,440	2.d., p., b. and f'c's'le.	"	11	July 17, 1918	Dec. 3, 1918	May 9, 1919
3	May 18, 1918	Canadian Warrior	Collingwood Shipbldg. Co., C'wood.	61	*3,995	205.	818,975	Lake, s.d., p., b. and f'c's'le	Bri. Corp.	9	Not stated	Dec. 21, 1918	Apr. 26, 1919
4	Mar. 15, 1918	Canadian Volunteer	Wallace Shipyards Ltd.	100	*4,495.75	207.	930,620.25	2.d., p., b. and f'c's'le.	Lloyd's	11	Oct. 1, 1918	Apr. 5, 1919	June 19, 1919
5	Nov. 25, 1918	Canadian Trooper	"	106	*4,540	217.	985,180	S.d., p., b. and f'c's'le.	"	11	Nov. 15, 1918	May 31, 1919	Aug. 7, 1919
6	Nov. 25, 1918	Canadian Aviator	"	101	5,100	210.	1,071,000	2.d., p., b. and f'c's'le.	"	11	Apr. 5, 1919	Oct. 9, 1919	Nov. 15, 1919
7	Nov. 25, 1918	Canadian Raider	"	102	5,100	210.	1,071,000	2.d., p., b. and f'c's'le.	"	11	May 31, 1919	Dec. 11, 1919	Jan. 17, 1920
10	July 5, 1918	Canadian Recruit	Collingwood Shipbldg. Co., C'wood.	62.	*3,964	205.	812,620	Lake, s.d., p., b. and f'c's'le	Bri. Corp.	9	Jan. 3, 1919	May 3, 1919	June 7, 1919
11	Oct. 17, 1918	Canadian Signaller	"	63	*3,975	205.	814,926.25	2.d., p., b. and f'c's'le.	"	9	Jan. 16, 1919	June 28, 1919	Aug. 30, 1919
12	Oct. 17, 1918	Canadian Gunner	"	64	*3,978	205.	815,541.25	2.d., p., b. and f'c's'le.	"	9	Feb. 10, 1919	Oct. 4, 1919	Nov. 6, 1919
13	Aug. 9, 1918	Canadian Settler	Tidewater Shipbuilders Ltd.	5	5,100	200.	1,020,000	S.d., p., b. and f'c's'le.	Lloyd's	11	Jan. 8, 1919	Sept. 20, 1919	Dec. 2, 1919
14	Aug. 9, 1918	Canadian Rancher	"	6	*4,850	200.	967,000	2.d., p., b. and f'c's'le.	"	11	Jan. 10, 1919	Nov. 1, 1919	July 11, 1920
15	Jan. 24, 1919	Canadian Fisher	"	7	5,100	200.	1,020,000	2.d., p., b. and f'c's'le.	"	11	Sept. 20, 1919	Aug. 14, 1920	
16	Jan. 24, 1919	Canadian Forester	"	8	5,100	200.	1,020,000	2.d., p., b. and f'c's'le.	"	11	Nov. 1, 1919		
17	Sept. 4, 1918	Canadian Trapper	Davie Shipbuilding & Repairing Co.	459	*4,992	200.	998,400	2.d., p., b. and f'c's'le.	"	12	Mar. 11, 1919	Oct. 9, 1919	June 24, 1920
18	Sept. 4, 1918	Canadian Hunter	"	460	*4,992	200.	998,400	2.d., p., b. and f'c's'le.	"	12	Mar. 28, 1919	May 7, 1920	Aug. 10, 1920
19	Sept. 4, 1918	Canadian Trader	Port Arthur Shipbuilding Co.	39	*3,341	205.	684,905	Lake, s.d., p., b. and f'c's'le	"	10 1/2	Dec. 9, 1918	May 5, 1919	July 18, 1919
19a	Mar. 1, 1919	Canadian Adventurer	"	41	*3,408	210.	715,680	Lake, s.d., p., b. and f'c's'le	"	10	Mar. 31, 1919	Sept. 8, 1919	Oct. 29, 1919
20	Sept. 4, 1918	Canadian Sailor	"	40	*3,357	205.	688,185	Lake, s.d., p., b. and f'c's'le	"	10 1/2	Dec. 10, 1918	May 31, 1919	Aug. 7, 1919
20a	Mar. 1, 1919	Canadian Sower	"	42	*3,406	210.	715,207.50	Lake, s.d., p., b. and f'c's'le	"	10	Mar. 31, 1919	Oct. 3, 1919	Nov. 18, 1919
21	Sept. 13, 1918	Canadian Mariner	Halifax Shipyards Ltd.	1	8,390	195.	1,636,050	2.d., p., b. and f'c's'le.	"	10	Feb. 24, 1919		
22	Sept. 13, 1918	Canadian Explorer	"	2	8,390	195.	1,636,050	2.d., p., b. and f'c's'le.	"	10	Mar. 15, 1919		
23	Oct. 11, 1918	Canadian Navigator	Canadian Vickers Ltd.	73	*4,581	215.	984,915	2.d., p., b. and f'c's'le.	"	11	Jan. 22, 1919	Oct. 18, 1919	Nov. 22, 1919
24	Oct. 11, 1918	Canadian Ranger	"	68	*8,382	188.	1,575,816	2.d., p., b. and f'c's'le.	"	11	Aug. 26, 1918	Apr. 19, 1919	May 23, 1919
25	Oct. 11, 1918	Canadian Seigneur	"	69	*8,391	188.	1,577,508	2.d., p., b. and f'c's'le.	"	11	Nov. 30, 1918	May 7, 1919	Aug. 14, 1919
26	Oct. 11, 1918	Canadian Miller	"	70	*8,390	188.	1,577,320	2.d., p., b. and f'c's'le.	"	11	Dec. 2, 1918	Aug. 16, 1919	Sept. 24, 1919
27	Oct. 11, 1918	Canadian Spinner	"	71	*8,393	188.	1,577,884	2.d., p., b. and f'c's'le.	"	11	Apr. 23, 1919	Nov. 8, 1919	Dec. 6, 1919
28	Oct. 11, 1918	Canadian Planter	"	72	*8,399.30	188.	1,579,068.40	2.d., p., b. and f'c's'le.	"	11	May 10, 1919	Nov. 22, 1919	Dec. 27, 1919
29	Jan. 24, 1919	Canadian Winner	Harbour Marine Co. Ltd.	1	8,390	198.	1,661,220	2.d., p., b. and f'c's'le.	"	11	July 14, 1919	June 29, 1920	
30	Jan. 24, 1919	Canadian Traveller	"	2	8,390	198.	1,661,220	2.d., p., b. and f'c's'le.	"	11	Aug. 9, 1919		
31	Dec. 11, 1918	Canadian Beaver	Collingwood Shipbldg. Co., Kingston	15	3,965.50	205.	812,722.50	2.d., p., b. and f'c's'le.	Bri. Corp.	9	Apr. 7, 1919	Dec. 10, 1919	May 11, 1920
32	Mar. 1, 1919	Canadian Runner	Port Arthur Shipbuilding Co.	43	4,350	215.	935,250	2.d., p., b. and f'c's'le.	"	11	Aug. 29, 1919	May 8, 1920	
33	Mar. 1, 1919	Canadian Carrier	"	44	4,350	215.	935,250	2.d., p., b. and f'c's'le.	"	11	Aug. 29, 1919	June 26, 1920	
34	Nov. 22, 1918	Canadian Importer	J. Coughlan & Sons	11	*8,381	198.	1,659,438	2.d., p., b. and f'c's'le.	Lloyd's	11	Apr. 26, 1919	Dec. 6, 1919	Feb. 5, 1920
35	Nov. 22, 1918	Canadian Exporter	"	12	*8,380	198.	1,659,240	2.d., p., b. and f'c's'le.	"	11	May 3, 1919	Dec. 27, 1919	Mar. 6, 1920
36	Nov. 22, 1918	Canadian Inventor	"	13	*8,350	198.	1,658,300	2.d., p., b. and f'c's'le.	"	11	July 24, 1919	Jan. 24, 1920	July 17, 1920
37	Nov. 22, 1918	Canadian Prospector	"	14	*8,350	198.	1,658,300	2.d., p., b. and f'c's'le.	"	11	Sept. 26, 1919	Feb. 24, 1920	June 15, 1920
38	Dec. 10, 1918	Canadian Cruiser	Halifax Shipyards Ltd.	3	10,500	197.50	2,073,750	3.d. p., b. and f'c's'le.	"	12	Oct. 2, 1919		
39	Dec. 10, 1918	Canadian Constructor	"	4	10,500	197.50	2,073,750	3.d. p., b. and f'c's'le.	"	12	Oct. 6, 1919		
40	Mar. 31, 1919	Canadian Sealer	Nova Scotia Steel & Coal Co.	5	*2,776.50	210.	583,065	S.d., p., b. and f'c's'le.	"	8 1/2	Mar. 27, 1919	Oct. 8, 1919	Dec. 20, 1919
41	Mar. 31, 1919	Canadian Miner	"	6	*2,778	210.	583,380	S.d., p., b. and f'c's'le.	"	8 1/2	Mar. 31, 1919	Apr. 3, 1920	May 7, 1920
42	Feb. 21, 1919	Canadian Reaper	Prince Rupert Dry Dock & Eng. Co.	1	8,390	198.	1,661,220	2.d., p., b. and f'c's'le.	Bri. Corp.	11	Sept. 27, 1919		
43	Feb. 21, 1919	Canadian Thrasher	"	2	8,390	198.	1,661,220	2.d., p., b. and f'c's'le.	"	11	Oct. 20, 1919		
44	Jan. 23, 1919	Canadian Otter	British American Shipbuilding Co.	4	4,575	215.	983,625	2.d., p., b. and f'c's'le.	"	11	Mar. 29, 1919	Apr. 13, 1920	July 18, 1920
45	Jan. 23, 1919	Canadian Squatter	"	5	4,575	215.	983,625	2.d., p., b. and f'c's'le.	"	11	July 14, 1919	July 26, 1920	
46	Sept. 11, 1919	Canadian Farmer	Collingwood Shipbldg. Co., C'wood.	65	*3,954	180.	711,720	2.d., p., b. and f'c's'le.	"	11	Sept. 3, 1919	Dec. 27, 1919	Apr. 28, 1920
47	Sept. 11, 1919	Canadian Observer	"	66	*3,950	180.	711,000	2.d., p., b. and f'c's'le.	"	11	Sept. 12, 1919	May 8, 1920	June 15, 1920
48	Sept. 2, 1919	Canadian Pathfinder	Dominion Shipbuilding Co.	10	3,500	180.	630,000	Lake, s.d., p., b. and f'c's'le	Lloyd's	11	Nov. 8, 1919		
49	Sept. 2, 1919	Canadian Engineer	"	11	3,500	180.	630,000	Lake, s.d., p., b. and f'c's'le	"	11	Nov. 8, 1919		
50	Sept. 18, 1919	Canadian Victor	Canadian Vickers Ltd.	77	8,390	170.	1,426,800	2.d. p., b. and f'c's'le.	Lloyd's	11	Dec. 10, 1919	June 22, 1920	
51	Sept. 18, 1919	Canadian Conqueror	"	78	8,390	170.	1,426,800	2.d. p., b. and f'c's'le.	"	11	Jan. 17, 1920	July 27, 1920	
52	Sept. 18, 1919	Canadian Commander	"	79	8,390	170.	1,426,800	2.d. p., b. and f'c's'le.	"	11	June 2, 1920		
53	Sept. 18, 1919	Canadian Leader	"	80	8,390	170.	1,426,800	2.d. p., b. and f'c's'le.	"	11	June 29, 1920		
54	Feb. 26, 1920	Canadian Locomotive	Midland Shipbuilding Co.	10	8,390	182.50	709,925	2.d., p., b. and f'c's'le.	Bri. Corp.	11	June 9, 1920		
55	Mar. 18, 1920	Canadian Highlander	Wallace Shipyards Ltd.	103	8,390	167.50	1,405,325	2.d. p., b. and f'c's'le.	Lloyd's	11			
56	Mar. 18, 1920	Canadian Skirmisher	"	104	8,390	167.50	1,405,325	2.d. p., b. and f'c's'le.	"	11			
57	Mar. 13, 1920	Canadian Rover	Collingwood Shipbldg. Co., C'wood.	67	8,390	182.50	709,925	2.d., p., b. and f'c's'le.	Bri. Corp.	11	June 5, 1920		
58	Mar. 13, 1920	Canadian Coaster	Collingwood Shipbldg Co., Kingston	16	8,390	185.50	709,925	2.d., p., b. and f'c's'le.	"	11	May 6, 1920		
59		Canadian Sapper	Nova Scotia Steel & Coal Co.	8	2,800	190.	532,000	2.d., p., b. and f'c's'le.	Lloyd's	8 1/2	May 4, 1920		
60	Feb. 2, 1920	Canadian Challenger	Davie Shipbuilding & Repairing Co.	476	8,390	167.50	1,405,325	2.d. p., b. and f'c's'le.	"	11	May 14, 1920		
61	Feb. 26, 1920	Canadian Harvester	Port Arthur Shipbuilding Co.	45	8,390	182.50	709,925	2.d., p., b. and f'c's'le.	Bri. Corp.	11	Mar. 30, 1920		
62	April 7, 1920	Canadian Transporter	J. Coughlan & Sons	20	8,390	167.50	1,405,325	2.d. p., b. and f'c's'le.	"	11			
63	April 7, 1920	Canadian Freighter	"	21	8,390	167.50	1,405,325	2.d. p., b. and f'c's'le.	"	11			

379,258.05      \$72,773,537.15

## Canada-West Indies Trade Agreement and Steamship Services.

During June a conference was held at Ottawa between members of the Governments of Canada, the Bahamas Islands, Barbados, Bermuda, British Guiana, British Honduras, Jamaica, the Leeward Islands, Trinidad and the Windward Islands, to consider the extent to which, and the means by which, the trade relations between Canada and the several colonies mentioned above could be rendered closer and more intimate, their trade extended and enlarged, and the means of communication between them improved and rendered fully efficient for all purposes. In the agreement arrived at, which was made public early in August, the Dominion Government affirms the principle of granting a preference on all goods being the produce or manufacture of any of the colonies mentioned above imported into Canada, which are now subject to duty or which may be made subject to duty at any future time, and the said colonies affirm the principle of granting a preference on all goods being the produce or manufacture of Canada imported into such colonies, which are now subject to duty or which may be made subject to duty at any future time. The preferences are set out in an appendix to the agreement.

The agreement contains the following provisions in regard to ship services:—

Article VIII. The governments of any of the colonies aforesaid, on giving six months notice, may provide that to be entitled to the concessions granted in articles V and VI the products of Canada shall be conveyed by ship direct without transshipment from a Canadian port into the said colony or by way of one of the other colonies entitled to the advantages of this agreement.

The Government of Canada on giving six months notice may provide that, to be entitled to the concessions granted in articles II and III, the products of any of the colonies aforesaid shall be conveyed by ship direct without transshipment from the said colony or from one of the other colonies entitled to the advantages of this agreement into a Canadian port. Provided that, should the discretion recognized in this article be at any time exercised by the Government of Canada, provision shall be made, in all contracts entered into with steamships subsidized by the Dominion and the colonies aforesaid and plying between ports in Canada and ports in the said colonies, for an effective control of rates of freight.

### Steamship Services—Eastern Group.

Article X. The Government of Canada will use its best endeavors to arrange for a mail, passenger and freight steamship service to come into effect as soon as possible, and in any case within three years, between Canada, Bermuda, the Leeward Islands, the Windward Islands, Barbados, Trinidad, and British Guiana, on the following lines:

(1) Steamers shall sail weekly from St. John or Halifax, calling one week on the outward passage at Bermuda, Barbados, Trinidad and British Guiana, and on the homeward passage at Trinidad, Grenada, St. Vincent, Barbados, St. Lucia, Dominica, Montserrat, Antigua, Nevis, St. Kitts and Bermuda; on alternate weeks calling on the outward passage at Bermuda, St. Kitts, Nevis, Antigua, Montserrat, Dominica, St. Lucia, Barbados, St. Vincent, Grenada, Trinidad, and British Guiana, and on the homeward

passage at Trinidad, Barbados, and Bermuda.

(2) The steamers shall be from 5,000 to 6,000 tons gross, capable of maintaining an ocean speed of 12 knots, and providing accommodation for 100 first class, 30 second class, and 100 steerage, or deck, passengers, and shall be provided with 'tween decks.

Article XI. The Government of Canada will stipulate in any contract entered into for such steamship service that:—

(1) There shall be reasonable proportionate allocation of passenger and cargo accommodation between the colonies mentioned in article X.

(2) There shall be no unfair differentiation in rates of freight against the smaller colonies as compared with the rates to larger colonies situated at a similar distance from St. John or Halifax.

(3) The steamers shall be so constructed that, so far as the traffic warrants, cold storage shall be provided if this can be secured without unreasonable additional cost.

Article XII. If a subsidized steamship service is arranged for, the Government of Canada will endeavor to secure the co-operation of the owners of such steamship service towards the provisions of hotels and bungalows in the colonies, the governments of the colonies being prepared on their part to offer such facilities as may be practicable, both as regards sites and financial assistance.

Article XIII. The representatives of the colonies mentioned in article X undertake to recommend to their governments that these governments shall contribute towards such subsidized steamship service, when established, not less than the following amounts annually: Barbados, £5,000; Bermuda, £2,000; British Guiana, £7,500; Leeward Islands, £2,500; Trinidad, £7,500; Windward Islands, £2,500; total, £27,000.

Article XIV. Pending the establishment of such service the Government of Canada will use its best endeavors to maintain a fortnightly service on the existing lines and to supplement it with such additional freight or passenger and freight vessels as the trade may require.

### Steamship Services—Western Group.

Article XV. The Government of Canada, subject to the adoption by the Governments concerned of the recommendations embodied in article XVI, undertakes to provide as soon as possible, and in any case not later than Jan. 1, 1921, a fortnightly freight, mail and passenger steamship service between Canada, the Bahamas, Jamaica, and British Honduras, on the following lines:—

(1) The steamers shall not be less than 3,500 long tons d.w., shall have an ocean going speed of not less than 10 knots, and shall have accommodation for from 15 to 20 first class passengers, and shall be provided with 'tween decks, and, so far as the traffic warrants, with cold storage, if this can be secured with reasonable cost.

(2) The steamers shall sail from such Canadian ports as freight conditions require and shall proceed to Belize in British Honduras, calling at Nassau in the Bahamas, and at such port or ports in Jamaica as may be necessary, and shall call on the return voyage at such port or ports in Jamaica as may be necessary, and at Nassau.

Article XVI. The representatives of the colonies mentioned in article XV undertake to recommend to their governments that these governments shall, if the service proves unremunerative, contribute 25% of any loss; provided that the amounts contributed shall not exceed, in the case of the Bahamas, £3,000 a year; in the case of British Honduras, £5,000 a year, and in the case of Jamaica, £5,000 a year.

Article XVII. This agreement shall be subject to the approval of the Parliament of Canada and of the legislature of each of the colonies aforesaid, and of the Secretary of State for the Colonies. Upon such approval being given, the agreement shall be brought into force at such time as may be agreed upon between the governments of Canada and of the colonies aforesaid by proclamation to be published in the Canada Gazette and in the official gazette of each of the said colonies.

Article XVIII. This agreement shall remain in force for ten years after the proclamation aforesaid and thereafter until terminated by 12 months written notice given either by the Government of Canada, or by the government of any of the colonies aforesaid, but in the latter case the agreement shall remain in full force and effect as to any of the other colonies which have not given such notice.

A Halifax, N.S., press dispatch says a meeting of the local board of trade's council was held there Aug. 20 to discuss a matter in connection with the Canada-West Indies trade agreement, information having been received by the board to the effect that unless certain conditions are complied with Bermuda may be left out as a port of call. It was shown that Bermuda's purchases in Canada amount to practically \$1,500,000, Halifax sharing largely in this. The council decided to write the Minister of Trade and Commerce, asking if the information is correct, and if it is, the board will make representations in the matter.

### Welland Canal Lock Gate Accident.—

While the s.s. Robert R. Rhodes, owned by W. E. Lawlor, Hawkesbury, Ont., up-bound and light, was being raised in lock 9, Welland Canal, Aug. 3, the two lower gates of the lock were broken over, and it was necessary to replace them by spare gates. It is stated that the ship did not touch the gates and that apparently the valves in the upper gates were opened when the lower gates were not properly mitered, but whether the responsibility for this rests on the lock motormen, or the ships crew, was not determined. Navigation was resumed at 6.30 a.m. Aug. 4, very few ships being delayed. The cost of the lock repairs is estimated at \$6,000, the ship was not damaged.

South American Steamship Co. Ltd. has been incorporated under the Dominion Companies Act, with \$750,000 authorized capital and office at Toronto, to operate freight and passenger steamships, and to carry on general navigation, transportation and other allied businesses. The incorporators are: M. L. Gordon, J. S. Duggan, J. W. Bicknell, T. S. H. Giles and M. H. MacGregor, Toronto.

The American Association of Port Authorities will hold its convention at Chicago, Ill., Oct. 4 to 6. A number of papers will be read, four of them dealing with Canadian ports.



# The United Kingdom Resumes Supremacy in Shipbuilding.

By Harrison Watson, Chief Canadian Trade Commissioner in the United Kingdom.

The outstanding feature of Lloyd's shipbuilding report for the quarter ended June 30, 1920, is that the further and uninterrupted increase in the tonnage of merchant vessels under construction in the United Kingdom has enabled that country to almost reverse her position of a year ago in comparison with the United States, in so far that, while on June 30, 1919, the tonnage building in the United States exceeded that under construction in the United Kingdom by approximately 1,350,000 tons, the surplus at the present time in favor of the United Kingdom is about 1,472,000 tons. In fact shipbuilding in the United States during the past year has fallen off by nearly a half, because whereas the tonnage returns under construction on June 30, 1919, showed 994 ships with a gross tonnage of 3,874,143, the present position shows 414 aggregating only 2,105,956 tons. The opposite result achieved in the United Kingdom is shown in the following table:

Description.	June 30, 1920.	
	No.	Gross tons.
Steel Steam.....	888	3,563,251
Ferro-Concrete . . . . .	3	860
Wood and composite . . . . .	4	1,799
<b>Total . . . . .</b>	<b>895</b>	<b>3,565,910</b>
Steel Sail.....	41	9,469
Ferro-concrete . . . . .	3	2,174
Wood and composite . . . . .	2	600
<b>Total . . . . .</b>	<b>46</b>	<b>12,243</b>
<b>Total, steam and sail . . . . .</b>	<b>941</b>	<b>3,578,153</b>

During the past three months ended June 30, 200 steamships, aggregating 584,829 tons, and 14 sailing ships with a tonnage of 3,775 tons, were commenced, while 154 steamships with a tonnage of 518,568 and 11 sailing ships aggregating 4,375 tons were launched.

It seems scarcely necessary to state that the extraordinary increase in U.S. ship construction which took place during the war was due to unique circumstances which have now largely passed away, and the results achieved are a lasting tribute to U. S. enterprise. Upon the other hand, even if there has been a heavy falling off from the express speed of war requirements, the U.S. has risen from her comparatively humble pre-war position to that of the second shipbuilding nation in the world, and on June 30 was constructing more than half of the merchant ships building in the whole of the world outside of the United Kingdom, with an output more than five times greater than her nearest competitor on that date—Holland.

Lloyd's figures show that on June 30 merchant ships being built in the whole world aggregated 7,720,904 tons, to which the United Kingdom contributed 3,578,153 tons, and all other countries 4,142,751 tons, which is in striking comparison with similar figures of a year ago, when the United Kingdom's share of 8,017,767 tons was only 2,524,050 tons against 5,493,717, so that the proportion during the twelve months has risen from 30% to 46%.

Construction in the British dominions has fallen from 346,453 tons in June, 1919, to 268,799 at present, and Canada's proportion has gone back from 261,643 tons to 209,405, but this is entirely due to a reduction of 78,000 tons in wooden ships, and there was an actual increase in steel ships of 26,000 tons.

The gross tonnage of merchant ship construction on June 30, 1920, in the principal countries, excluding the United Kingdom, was:—

	Tons.
United States .....	2,105,956
Holland . . . . .	398,915
Italy (including Trieste) .....	353,914
British Dominions .....	268,799
France . . . . .	265,302
Japan . . . . .	254,260
Sweden . . . . .	125,899
Denmark . . . . .	118,439
Norway . . . . .	87,589

## A United States View of the Situation.

Washington, D.C., press despatch, Aug. 16.—Lloyd's shipbuilding returns, just issued, show that the volume of shipping under construction in England has increased by nearly 60% during the last 15 months, while that of the United States has been reduced by nearly 50%. The complete change of position between the two countries is illustrated by the following figures. At the end of June, 1919, the amount of tonnage under construction in the United States exceeded that of Great Britain by over 1,250,000 tons. This excess in the U.S. had by the end of 1919 been turned into an excess in Great Britain of 27,000 tons, while at this time the amount of tonnage being built in England exceeds that of the United States by nearly 1,500,000 tons.

	March 31, 1920.		June 30, 1919.	
	No.	Gross tons.	No.	Gross tons.
United States .....	814	3,379,731	701	2,489,820
Great Britain .....	7	1,401	10	2,456
Other countries .....	4	1,799	8	2,293
<b>Total . . . . .</b>	<b>825</b>	<b>3,382,931</b>	<b>719</b>	<b>2,494,569</b>
United States .....	35	8,451	35	9,873
Great Britain .....	4	2,854	23	19,608
Other countries .....	1	189	.....	.....
<b>Total . . . . .</b>	<b>40</b>	<b>11,494</b>	<b>63</b>	<b>29,481</b>
<b>Total, steam and sail . . . . .</b>	<b>865</b>	<b>3,394,425</b>	<b>782</b>	<b>2,524,050</b>

The explanation of this great change, according to reports received here, is said to lie in the fact that British shipbuilding industries, released from government control, are now working off five years' arrears, whereas the great revival in the U.S., due to the war, is now declining.

Closer analysis of the relative shipping position of the two nations discloses the fact that, while U.S. tonnage has increased by over 10,000,000 tons in six years, that of Great Britain is still less than it was in 1914 by 781,000 tons, and that during the year ended June 30, 1920, the U.S. merchant marine fleet increased over 2,500,000 tons, whereas the British increase was only slightly over 1,750,000 tons.

The total amount of tonnage under construction in England is just over 3,500,000 tons, and for the rest of the world slightly over 4,000,000 tons, which seems to indicate that in a very short time the supply of cargo tonnage will exceed the demand. Freight rates are already falling and the market price of cargo tonnage has dropped by 25%.

The Northern Chartering Co. has been incorporated under the Manitoba Companies Act, with \$10,000 authorized capital and office at Winnipeg, to carry on business as general brokers and agents for ships, marine and other insurance, transportation lines, etc. The incorporators are: R. D. and A. T. H. Smith, A. J. Milligan, W. S. McEwen, and C. Darragh, Winnipeg.

# Increases in Great Lakes Freight and Passenger Rates.

Washington, D.C., press despatch, Aug. 24.—Increases of 40% on freight traffic and 20% on passenger traffic between ports on the Great Lakes were authorized by the Shipping Board today. The increases may be made effective on one day's notice not later than Jan. 1, 1921. It is said the carriers will increase the rates at once, in accord with the decision, which says, in part:—"The advances proposed by the Great Lakes carriers approximate 40% on freight and 20% on passenger traffic. It appears from the record that the expenses incident to the operation of vessels on the Great Lakes have increased substantially to the same extent as on the Atlantic coast. For example, it was shown that these carriers are now paying for bunker coal approximately 100% more than they paid in 1919, and they claim to be receiving a poorer quality than was then available. These carriers also claim that they are paying 60% more for materials and supplies, and 40% more for labor than they paid in 1919. A situation existing on the Great Lakes which does not confront the carriers operating on the Atlantic and Gulf coasts is that the Great Lakes operations are seasonal, and during several months of the year some of the carriers are obliged to discontinue operation on account of weather conditions. During this non-operating period the overhead and fixed charges of the carriers remain fairly constant."

## Radiotelegraph Direction Finding Stations.

The Sydney, N.S., Post contained the following recently:—"The local office of the Marine Department has been informed that radiotelegraph direction finding stations are to be opened by the government at Chebucto Head, Canso and Cape Race. The purpose of this type of station is to ascertain the true bearings of a ship from the station, thus affording aid to mariners in determining their position."

The facts are, that the Naval Service Department erected four of these stations, at Cape Sable, Chebucto Head, Cape Canso and Cape Race, during the war, but for easily understood reasons this was not given publicity. When the restrictions on publicity were removed, Canadian Railway and Marine World dealt with the matter fully, a descriptive article, with illustrations, being given in the issue of May, 1919.

## Sydney, Australia, Port Improvements.

Additional railway and harbor facilities for Sydney, New South Wales, are being provided at Darbor, west of the city and at the head of the landlocked bay on which the city is situated. An area of 23 acres at the inner end of Darling harbor has been reclaimed by filling. Double deck steel and concrete freight sheds are being built on long piers for ocean steamship service, and will be served by a waterfront railway connecting the city terminals with the freight belt line. At Glebe Island a grain elevator, with a storage capacity of 6,500,000 bush, is under construction. In order to keep switching movements clear of the harbor work a freight yard with capacity for 3,000 cars has been built at Rozelle, the junction of the lines to the docks and to the grain elevator.

## Mainly About Marine People.

Sir Montagu Allan, of Montreal, formerly of the Allan Line Steamship Co., who arrived from England early in August, spent the month with Lady Allan at St. Andrews, N.B.

Hon. C. C. Ballantyne, Minister of Marine, returned to Ottawa, Aug. 3, after having spent some time at St. Andrews, N.B., and left Ottawa, Aug. 12, on a trip to the Pacific coast.

W. A. Black, of Pickford & Black Ltd., steamship owners, etc., Halifax, N.S., has been appointed a governor of Dalhousie University.

Mrs. G. M. Bosworth, wife of the chairman, Canadian Pacific Ocean Services, Ltd., accompanied by her mother, Mrs. W. D. Birchall, and Mrs. J. B. Cole, all of Montreal, made a short trip recently to Belgium and France, after having christened the s.s. Empress of Canada at Glasgow.

H. B. Brenton, Purchasing Agent, Union Steamship Co. of British Columbia, was killed in a seaplane accident, in English Bay, Aug. 18. It is stated that there was an explosion on the machine before it fell from a height of 1,000 ft., and it was not ascertained whether he jumped, or fell from the machine to the water. E. H. Beazley, Managing Director of the company was also killed in an aeroplane accident on May 24.

G. J. Desbarats, C.M.G., Deputy Minister of the Naval Service, and Mrs. Desbarats, have returned to Ottawa from Europe, where Mr. Desbarats attended the Seamen's Conference at Genoa.

Capt. Patrick Duggan, a pioneer steamboat master on the Ottawa River, died at Ottawa, Aug. 8, aged 84, following a fall from a street car in Ottawa last December. He was engaged in navigation on the Ottawa River for 40 years, and after retiring from that occupation, was in the Customs Department, Ottawa, for 19 years.

Sir Frederick Orr Lewis, President, Canadian Vickers Ltd., shipbuilders, etc., Montreal, and Lady Lewis, sailed from England May 25 for Montreal.

S. S. Moncur, Passenger Manager, Anchor-Donaldson Line, Glasgow, Scotland, sailed from Montreal Aug. 21 on the s.s. Saturnia, for Glasgow, after a trip across Canada and the U.S.

J. P. Steedman, of Hamilton, Ont., who is largely interested in steamship matters, was fined \$2,100 recently, in the police court, for neglecting to file a statement of his income for taxation purposes.

Major W. G. Swan, D.S.O., Chief Engineer, Vancouver Harbor Commission, is one of the first engineers to be granted certificates in civil engineering, under the recently enacted Engineering Profession Act of British Columbia, which provides that engineers practising in the province are given to July 1, 1921, to apply for membership in the Association of Professional Engineers, and to have their qualifications passed upon by a board of examiners.

E. E. Tedford, whose appointment as Marine Superintendent, Canadian Government Merchant Marine Ltd., Montreal, was announced in our last issue, was born at Yarmouth, N.S., May 21, 1870, and from Oct. 1889 to Aug. 1892 was second officer on ships operated by A. Stoneman, H. Cann & Sons, Yarmouth, N.S., and W. Thomson & Co., St.

John, N.B.; Sept. 1892 to Nov. 1894, chief officer on ships operated by W. Thomson & Co., St. John, N.B.; Feb. 1895 to July 1896, chief officer on ships operated by W. H. Ross & Co., Liverpool, Eng.; Sept. 1896 to Oct. 1897, master, same company; Nov. 1897 to Apr. 1907, master, G. Windram & Co., Liverpool, Eng.; May 1907 to Apr. 1920, Marine Superintendent, Strath Steamship Co., Cardiff, Wales, and from 1917 superintendent construction of steamships for British Government, building at different yards in Ontario.

Frank Cameron Turner, who has been appointed Travelling Passenger Agent, Cunard Line, Anchor-Donaldson Line and Anchor Line, Montreal, was born at Riviere-du-Loup, Que., Apr. 22, 1892, and entered transportation service Oct. 15, 1919, since when he has been, to July 1911, stenographer and ticket clerk, G. T.R., Quebec, Que.; July 1911 to July 1912, Assistant ticket clerk, Canadian Northern Ry., Quebec, Que.; July 1912 to Apr. 1913, ticket clerk, G.T.R., Bonaventure station, Montreal; May to Dec. 1913, ticket agent, Canadian Northern Steamships, s.s. Royal Edward; Jan. 1914 to July 1915, ticket clerk, G.T.R., Montreal; Aug. 1915 to Aug. 1916, Soliciting Freight and Passenger Agent, Great Northern Ry. (U.S.), Montreal; Aug. 1916 to Feb. 1917, Travelling Passenger Agent, Canadian Northern Ry., Montreal; Feb. 1917 to Dec. 31, 1919, City Passenger Agent, same road, Montreal; Jan. 1 to Aug. 1, 1920, Travelling Passenger Agent, Robert Reford & Co., General Agents, Cunard, Anchor, and Anchor-Donald Lines, Montreal.

Jas. Weir, one of the founders of G. and J. Weir, Marine Engineers, Glasgow, Scotland, died there recently, aged 78. He retired from active participation in the business about 12 years ago, leaving the actual management to his sons, Lord Weir of Eastwood, and J. G. Weir, C.M.G., C.B.E.

J. R. Wren has been appointed superintendent of the survey and measurement of ships, vice R. H. Keay, resigned, and has also been appointed surveyor of accommodation for seamen, for the port of St. Andrews, N.B.

### No Embargo on United States Grain Shipments via Canadian Ports.

At a meeting of representatives of the Montreal Harbor Commissioners, the steamship, railway, warehousing and grain interests was held at the Montreal Harbor Commissioners' offices, Montreal, Aug. 17, W. G. Ross, President of the Commission, explained that it had been called to discuss a rumor that it was intended to place an embargo upon United States grain and other products passing through Canadian ports. He showed what facilities had been provided for handling the grain traffic in the coming rush season, and mentioned that whereas in 1914—the biggest year in the history of the port for grain movement—up to the end of July there had been shipped 12,649,000 bush., for the same period this year the shipment had been 25,002,000 bush. The port is capable at present of handling 900,000 bush. a day, and liners can take between 100,000 and 150,000 bush. per day from three eleva-

tors. The total movement through the port daily might thus be 900,000 bush., which meant that tramp tonnage to the extent of 750,000 bush. a day is required to carry away all this grain. In regard to preparations being made for handling the new grain crop, he said that the grain berth at shed 17 would be completed early in October, and that the commissioners were studying the problem of providing further accommodation of this nature.

It was stated that the C.P.R. is ready to take to Montreal 250 cars of grain a day, the equivalent of 400,000 bush., that the G.T.R. could take 150 to 175 cars a day, and in addition to this, that there would be the regular movement of grain by all-water route. In this latter respect, it was stated that the Canada Steamship Lines were to put on seven extra steamships this year over what it had last year to ply between Port Colborne and Montreal, which will greatly increase the volume of direct water-borne grain traffic.

Thos. Robb, Manager, Shipping Federation of Canada, gave information as to correspondence between the Federation and the Minister of Trade and Commerce, from which it appeared that a rumor had obtained circulation that an embargo would be placed, the result being owing to the uncertainty prevailing, that 6 ships had been diverted which were originally scheduled to load grain at Montreal. Grain brokers were also refusing to book grain through fear of a possible embargo.

A letter from the Minister of Trade and Commerce was read which stated that the Government had no intention of placing an embargo on the transit of U.S. products through Canadian ports.

We are officially advised from Ottawa that shippers of U.S. grain and other produce, in order to secure the passage of such through Canadian territory, must make their own arrangements with the carrying companies, and, in the case of wheat, with the elevator companies as well. The amount that it will be possible to carry through will depend on the shipping available at the port of embarkation, and the contract which can be made with the carrying and elevator companies. It must be borne in mind that there are only two months of open season of navigation during which grain of the Canadian west has to be moved in the largest volume possible. Regard must be had for the disposition of such transport on the part of carrying and elevating companies through whose hands such grain must pass to the seaboard.

The Empress Navigation Co. Ltd. has been incorporated under the Dominion Companies Act, with \$100,000 authorized capital, and office at Ottawa, Ont., to build, own and operate steam and other ships, harbors, docks, elevators, warehouses, and railway and steamboat terminals, and to carry on business generally as carriers of passengers and freight on land and water, shipowners, shipbuilders, forwarders, etc. The incorporators are,—W. H. Dwyer, R. T. Holcomb, W. Cochrane, J. W. York, J. R. Osborne, and A. E. Provost, all of Ottawa. The Empress Navigation Co. recently purchased the s.s. Empress, formerly owned and operated by the Central Railway Co. of Canada, and also acquired the s.s. Victoria, owned formerly by the Victoria Navigation Co., Thurso, Que., details of both of which were given in our last issue.

## United States Shipping and Shipbuilding Notes.

New York, N.Y., is reported to have established a new high record for 1920 in point of ship entrances, 508 steamships engaged in foreign trade having arrived there during June.

The gross tonnage of U.S. shipping is reported to have increased since 1914 by more than 500% and now to stand at 16,049,000, which places the U.S. second only to the United Kingdom, credited with 18,330,000 tons.

The U.S. Shipping Board, on Aug. 18, opened hearings on the applications of 60 coastwise, gulf, and Great Lakes steamship lines for freight rate increases, corresponding with those granted under the Interstate Commerce Commission's jurisdiction.

On June 1 private U.S. shipyards were building, or were under contract to build, for private ship owners, 345 steel ships of 1,060,643 gross tons, compared with 348 steel ships of 1,391,341 gross tons on May 1, 1919. This is the first decline since July, 1919. These figures do not include government ships building or contracted for by the U.S. Shipping Board out of money voted by Congress.

The U.S. Bureau of Navigation reports 171 sailing, steam, gas and unrigged vessels of 214,840 gross tons as having been built in the U.S., and officially numbered, during July. The output of U.S. shipyards, of ships officially numbered by the Bureau, during the 12 months ended July 31, was 2,086 ships, of 3,554,352 gross tons, of which 684 were steel ocean steamers aggregating 3,146,257 gross tons.

According to its latest statistical compilation the U.S. Shipping Board owns and controls a total gross tonnage of ships amounting to 9,243,464. This comprises 1,493 ships, of which 1,388 are cargo, 28 cargo and passenger, 59 tank, 15 refrigerator, and 3 transport ships. About one-ninth of the total consists of wood, composite and concrete ships, including 271 wood and composite, of 997,854 tons, and 4 concrete, of 13,500 tons.

The U.S. Shipping Board is reported to be getting together in the James River the wooden ships which were built by the U.S. Emergency Fleet Corporation, during the war, and it is said that there will be eventually 170 of them gathered there, and that they will be offered for sale to any interests who care to purchase them. During the war the U.S. Government built about 300 wooden steamships at an approximate cost of \$250,000,000, but owing to delays in construction, few, if any, of them were available for war transportation purposes.

The shipyard at Hog Island, Pa., which was laid out by the U.S. Emergency Fleet Corporation during the war, is offered for sale to the highest bidder, tenders being invited up to Sept. 20. It is announced that 122 cargo steamships, totalling approximately 976,000 d.w. tons, were built and equipped at that yard. The plant has an area of 946 acres, a water frontage of two miles, with 82 miles of railway, a complete sewerage and drainage system, 50 shipbuilding ways, 7 piers and a number of buildings.

The U.S. Shipping Board issued the following notice Aug. 13:—"Since the action of the Interstate Commerce Commission in authorizing common carriers under its jurisdiction to increase transportation rates, the Shipping Board has

received numerous requests from water carriers, subject to the Board's jurisdiction under the Shipping Act, 1916, and Merchant Marine Act, 1920, and operating on the Atlantic Coast, Gulf of Mexico and Great Lakes, to materially increase their present rates. The Board has also received from shippers and commercial organizations protests against such proposed advances, and in order that the reasonableness of the proposed advances may be determined, the Board desires to consolidate all such applications for advances in rates, and to have hearing thereon, beginning Aug. 18."

## President D. B. Hanna on Steamship Services.

Daily newspaper press dispatches credited D. B. Hanna, President Canadian National Rys. and Canadian Government Merchant Marine, with having stated, during his recent visit to the Pacific coast, that the C.N.R. would inaugurate a Vancouver-Victoria-Seattle steamship service, that passenger steamships would be put in operation between Vancouver and Oriental ports as soon as available, and that the company had been in negotiation for the purchase of a passenger fleet, involving an expenditure of approximately \$85,000,000, but that it had fallen through.

We are advised that Mr. Hanna did not state that the C.N.R. intended to inaugurate a Vancouver-Victoria-Seattle steamship service, but did say that the C.N.R. service on the Pacific Coast would not be rounded out until such a steamship service was provided. The Grand Trunk Pacific Coast Steamship Co. is already operating a coast service, which is now under Canadian National Rys. management. Mr. Hanna did not say that passenger ships would be put in operation between Vancouver and Oriental ports, but he did say that on the completion of the Dominion Government's present steel cargo steamship shipbuilding programme, 12 steamships aggregating some 100,000 d.w. tons, would be operated out of Vancouver. Mr. Hanna did not say that the Canadian National Rys. had been negotiating for the purchase of a fleet of passenger steamships, involving an expenditure of approximately \$85,000,000, or any other amount, no such negotiations having taken place.

## The Position of Canadian Shipping.

Shipping facilities in Canadian ports are in course of being greatly improved. As regards Europe, our eastern ports are in touch with more points in the United Kingdom than ever before, with several in Norway, with Gotenburg, Malmo and Norrkoping in Sweden, with a free port at Danzig, with Antwerp and Rotterdam in Holland, Passage in Spain, and Havre, Bordeaux and St. Nazaire in France, while for the first time there will be a direct line from Montreal to Mediterranean ports, such as Gibraltar, Palermo, Naples and Genoa. This line may be extended to take in Odessa and other ports in the Black Sea. There have been for years regular sailings between Canada, British West Indies and British Guiana, and latterly Canadian Government Merchant Marine ships have also been running to Cuba, Jamaica, Barbados, Trinidad and British Guiana.

A new field of trade possibilities has been opened up by a service which has been instituted from Montreal to the west coast of Africa. A new line from

Montreal to Australia, and many new ships on the Vancouver-Australia-New Zealand route have been reported. More ships are to be placed on the Vancouver-Japan-China service. From the east and west, Canada is now in touch with her markets. Direct shipping facilities of this nature are prerequisite to the establishment of our foreign trade on any satisfactory basis. The lack of them involves, at the best, higher transportation charges, and in many cases means that our imports and exports pass to their destination through the hands of a foreign middleman. During the last six months the usual course of trade has been interrupted, and much United States freight has passed through Canadian ports on account of the severe traffic congestion existing in the U.S.—Royal Bank of Canada Monthly Letter.

## Shipbuilding Depression in Japan.

Attacks on Japanese interests overseas, combined with internal depression, have influenced the great shipping companies to modify or to abandon the ambitious building programmes they decided on at the height of the shipping boom. It is reported that the Nippon Yusen Kaisha and the Osaka Shosen Kaisha have cancelled their decision to build an aggregate of 1,000,000 tons, and this will seriously affect the already attenuated war boom in the shipyards. The outlook in the shipbuilding industry is thus most discouraging. The largest yards are engaged in warship construction, and are showing evidence of the sobering effects of financial depression. A member of the House of Peers ventured recently to propose that Japan should economize by purchasing warships abroad. The fact that such a proposal has been seriously broached to a patriotic assembly is eloquent of changing times.

**Employment of Children on Ships.**—The International Seamen's Conference at Genoa, Italy, has decided that no children under 14 years old shall be permitted to work on seagoing ships, unless on ships on which only members of the same family are employed, and in case of children working on training ships under the supervision of public authorities, these latter, it being decided, being actually pupils and there being no intention of obtaining profit from their work.

**Seamen's Working Hours, Etc.**—Brussels, Belgium, press dispatch, Aug. 13.—The International Seamen's Federation has adopted resolutions for immediate steps for the enforcement of a demand for a 48-hour maximum week at sea, a 44-hour week on port duty, and for fixed international seaman's wage. An amendment urges the calling of a conference of ship owners and seamen before the precipitation of a strike.

**Freight Rates on Great Lakes.**—In commenting on the general condition in lake freight traffic, L. A. W. Doherty, General Traffic Manager, Canada Steamship Lines Ltd., is reported to have said that there will probably be an increase in freight rates on the Great Lakes in the autumn, but that no changes will be made in passenger rates.

**B. W. B. Navigation Co. Ltd.** has been incorporated under the British Columbia Companies Act, with \$1,000,000 authorized capital, and office at Vancouver, to build, own and operate steam and other vessels of every description, wharves, piers, drydocks, warehouses, etc.

### Atlantic and Pacific Ocean.

The Canadian Pacific Ocean Services' s.s. Minnedosa completed her run from Liverpool, Eng., to Father Point, recently, in 6 days and 9 hours. She had favorable weather all the way and came through Belle Isle Strait.

Five steamships, the Tunisian, Corsican, Canada, Saturnia and Megantic, arrived at Montreal during the week end Aug. 14-16, bringing approximately 5,000 passengers and making a new record for that port.

The Elder Dempster & Co.'s s.s. Kaduna arrived at Simonstown, South Africa, Aug. 15, from Montreal with fire in no. 3 hold. It was extinguished shortly after her arrival, but it is stated that the cargo is considerably damaged.

Furness Withy & Co. are operating two steamships on a service between Liverpool, Eng., St. John's, Nfld., and Sydney, N.S. It is said to be the first cargo transatlantic steamship service making Sydney its Canadian terminal port.

A long distance wireless telephone station is reported to be under construction at Devizes, Wiltshire, Eng. It is said that conversation will be maintained with ships on the Atlantic to a distance of over 1,000 miles, and that the station will be kept in touch with ships at least two-thirds of the way across the ocean.

It is announced that U.S. mail for the Orient is being transported across the Pacific Ocean by Canadian Pacific Ocean Services' steamships and that a probable feature of the arrangement in the future will be the conveyance of mail from Seattle, Wash., to Vancouver, B.C., by aeroplane, thus saving nearly a day on the trip between those points.

The Canadian Robert Dollar Steamship Co., Vancouver, B.C., is reported to have bought an 11,500 ton steamship named Parisian, in Great Britain, recently, and it is stated that she will sail from London, Eng., about the end of August for New York, in ballast, and that on arrival she will be placed on the Canadian register under the name of Esther Dollar.

Canadian Pacific Ocean Services' s.s. Tunisian and Manchester Liners' s.s. Manchester Division, collided in the St. Lawrence near Quebec, Aug. 8, considerable damage being done to the hulls of both ships, which, however, both made port in safety without assistance. An enquiry into the casualty was opened before Capt. L. A. Demers, Dominion Wreck Commissioner at Montreal, Aug. 19.

The Anchor-Donaldson Line's steamships Athenia and Letitia are expected to be completed by the Fairfield Shipbuilding & Engineering Co., Glasgow, Scotland, shortly. They will be operated between Glasgow and Montreal, and will be 520 ft. long overall, with 66 ft. beam, and with accommodation for 2,000 passengers. They are designed for a speed of 15 to 16 knots an hour using fuel oil. We are advised that they are not expected to be on the route until next summer.

Canadian Pacific Ocean Services' s.s. Empress of Britain, which has been overhauled and reconditioned after her war service, details of which work were given in our last issue, underwent a series of trials early in August, in the Irish Sea, when she developed a speed of 19 knots an hour, or one knot better than when she was burning coal. She is scheduled to sail from Liverpool, Sept. 1, for Quebec, and from Quebec Sept. 15.

Canadian Pacific Ocean Services Ltd.

has arranged with the Japan and China Government railways for the sale of overland tickets in connection with its ocean tickets, between Yokohama and Shanghai, in either direction, to enable passengers to visit the principal points of business, historical and scenic interest, in Japan, Korea and China. Tickets are limited to 90 days, allow certain stopovers, and include express train charges and transit duty.

Canada Steamship Lines Ltd. has been appointed Canadian passenger and freight agents for the U.S. Mail Steamship Co., which has been organized recently to take over from the U.S. government, for operation, a number of former German passenger and freight steamships. It is stated that when the company is completely organized it will have in operation over 100 steamships, which will be operated to London and Plymouth, Eng., Havre and Cherbourg, France, to Danzig and on other routes not yet decided upon.

The Cunard Line announces that two additional steamships building at Birkenhead and Wallsend on Tyne, Eng., named respectively Samaria and Laconia, will be launched shortly. They are to be 625 ft. long over all, with 74 ft. beam, 30 ft. draft and 27,000 tons displacement. They will be equipped with geared turbines of 12,500 h.p., for an average sea speed of 16 knots, the boilers being fired with fuel oil. They will be of the three class type, with accommodation for 343 first class, 347 second class and 1,698 third class passengers, and 315 officers and crew.

The Cunard Co. has, according to a Montreal press report of Aug. 18, sold the s.s. Royal George to Furness Withy & Co., for operation between Liverpool, Eng., and Boston, Mass. The s.s. Royal George was built at Glasgow, Scotland, in 1908, when she was named Cairo, for the Egyptian Mail Steamship Co.'s Marseilles-Mediterranean service. She was bought in 1909 by Canadian Northern Steamships Ltd., and after being remodelled to make her suitable for Atlantic service, was operated between Canada and Avonmouth, Eng. On the Canadian Northern deciding to relinquish the ocean passenger steamship business, the ship was sold, with others belonging to the company, to the Cunard Co. The report of the sale is unconfirmed, according to our latest advice on Aug. 25.

### Maritime Provinces and Newfoundland.

S. C. MacMillan has been appointed measuring surveyor of shipping, Isaac's Harbor, N.S.

J. B. Hachey and A. Gatain have been appointed pilot commissioners for the

pilotage district of Bathurst, N.B., vice J. J. S. Hachey and H. White, resigned.

The certificates of registration, issued under the Nova Scotia Companies Act, to Stella Maris Steamship Co. Ltd., and the Coastal Dredging & Construction Co. Ltd., have been revoked.

The Dominion Public Works Department will receive tenders, to Sept. 14, for repairs to the breakwater at Port Lorne, N.S., and for an addition to the east breakwater at Port Maitland, N.S.

The Dominion Public Works Department has established a new harbor head-line at Halifax, N.S., beyond which wharves, piers, breakwaters, and similar structures are not permitted to be built.

Tenders were received by the Naval Store Officer, H.M.C. Dockyard, Halifax, N.S., at the end of August, for the purchase of a number of small motor, steam and sailing boats at the dockyard and at Sydney, N.S.

The s.s. Martara, owned by G. W. Jones, New York, ran ashore near Lunenburg, N.S., Aug. 13, and is reported a total loss, having broken her back over the ledge. She was bound, in ballast, from Philadelphia to Botwood, Nfld.

The suction dredge Tornado, which was towed from Norfolk, Va., for use in the Courtenay Bay development works, arrived at St. John, N.B., Aug. 4, where she will be operated by the St. John Drydock & Shipbuilding Co., contractors for the work. The Tornado is owned in Toronto, and was built there by Polson Iron Works.

The Nova Scotia Shipping Co.'s s.s. steam tug Diamond, while bound from Parrsboro to Economy, N.S., July 30, sprang a leak when off Five Islands, and sank. She was built at Pictou, N.S., in 1894, and was screw driven by engine of 10 h.p. Her dimensions are,—length 43.3 ft., breadth 12.4 ft., depth 5.6 ft.; tonnage 23 gross, 15 net.

The Minister of Customs and Inland Revenue is reported to have stated at St. John, N.B., Aug. 16, that the Marine Department has an appropriation of \$25,000 for the installation of a radiotelegraph station in St. John harbor, to assist ships in negotiating the entrance to the harbor in safety during storms and dull weather.

The International Mercantile Marine Co. has presented Capt. C. F. Martin, superintendent of tow boats, G. S. Campbell & Co., and Capt. T. O. Ormiston, master of the tug S. F. Roebing, of Halifax, N.S., with an engraved gold watch each, as a memento of their services in rescuing the crew of the Leyland Line s.s. Bohemian, when she stranded on Sambro ledges, near Halifax, on Mar. 2.

The Dominion Coal Co.'s s.s. Wabana,

### Ships Added to and Deducted From the Canadian Register During May, 1920.

	Steam.		Sailing.	
	No.	Tonnage—Gross Registered.	No.	Tonnage—Gross Registered.
<b>Added.</b>				
Built in Canada .....	23	11,457 6,852	10	1,590 1,384
Purchased from foreigners.....	5	1,115 651	2	909
Transferred from United Kingdom.....	1	1,943 785	.....	.....
New registers .....	4	102 96	.....	.....
Added without re-registry .....	.....	26 17	.....	.....
<b>Totals .....</b>	<b>33</b>	<b>14,643 8,401</b>	<b>12</b>	<b>2,499 2,230</b>
<b>Deducted.</b>				
Wrecked or otherwise lost.....	3	61 50	2	45 77
Broken up or unfit for use.....	4	444 302	5	77
Sold to foreigners.....	4	1,585 1,301	.....	164
New registers .....	.....	.....	5	.....
Other ships .....	3	226 97	.....	66
Added without re-registry .....	.....	.....	.....	.....
<b>Totals .....</b>	<b>14</b>	<b>2,316 1,750</b>	<b>12</b>	<b>286</b>

while bound from Sydney, N.S., to Bell Island, Nfld., in ballast, to load ore, during July, ran on Cape Freels rock near Cape Pine, Nfld. She refloated at high tide and proceeded to St. John's under her own steam, where she was placed in the drydock for overhaul and repairs to her fore foot and stern. A number of plates were also damaged below the water line.

The schooner Netherton, owned in Dennisville, Me., was abandoned at sea in a burning condition, early in August. She was built at St. John, N.B., in 1918, and named Dornfontein. While on her maiden voyage she was captured by a German raider in the Bay of Fundy and set on fire, and was afterwards rebuilt and renamed. She was a four master, of 666 net tons, and cost about \$100,000.

The Royal Mail Steam Packet Co.'s s.s. Cobequid, which was wrecked on Trinity Ledge, some time ago, is being salvaged by the wrecking steamship Coast Guard. It was expected that the material would be cleaned up before the end of August, after which the wrecking steamship would proceed to Beatson's Rock, near Briar Island, to deal with the s.s. Corinthian, which stranded, and afterwards sank, there, early in 1919.

The British s.s. Willdomino struck an uncharted rock off the eastern shore near Canso, N.S., towards the end of July, and tore a large hole in her bow. The C.G.S. Lady Laurier was sent to her assistance and towed her into Halifax. The s.s. Willdomino, which was bound from St. Michaels, via Halifax, for New York, was formerly named War Convoy, and was built by J. Coughlan & Sons, Vancouver, B.C., for the British Government, under order from the Imperial Munitions Board.

The U.S. Shipping Board's wooden steamship Quinnesco was taken into Halifax, N.S., at the end of July, considerably damaged by fire. She sailed from Newport News, Va., July 4, for Sydney, N.S., where she took on a cargo of coal, and sailed for Aarhus, Denmark, via Hull, Eng., July 17. When about 700 miles east of Halifax, fire was discovered in her port bunker. Considerable damage was done to her planking before the fire was subdued. She was taken to port under her own steam, and by her own crew.

The Minister of Customs and Inland Revenue is reported to have stated at St. John, N.B., Aug. 11, that the filling of the west channel, between Negro Point breakwater and Partridge Island, to provide protection for docks 15 and 16, would be commenced immediately. It is also stated that a floating grain elevator will be placed in the harbor next winter, and it is possible that one of the floating elevators of 6,000 bush. an hour capacity, owned by the Montreal Harbor Commissioners, will be bought or hired for use at St. John.

The Naval Service Department will receive tenders to Sept. 9, for the purchase of the steamship Thirty-three as she now lies at Halifax, N.S. She was built at North Shields, Eng., in 1902, and is screw driven by engine of 21 h.p., at an approximate speed of 9 knots an hour. The hull is of steel, with the following dimensions,—length 80 ft., breadth 18.1 ft., depth 8.3 ft., tonnage 79 gross, 33 net.

Job Bros. & Co., St. John's, Nfld., are offering for sale 2 three-masted wooden schooners built with hardwood frames, and with stem, stern post, rudder stock and keel all with galvanized fastenings below the waterline. They are designed

on lines to make fast sailers and are guaranteed to pass American Bureau and Bureau Veritas A1 classifications. They have the following dimensions,—length of keel 120 ft., registered length 128 ft., beam 28 ft., depth shoalest place 10 ft. 8 in., depth deepest 12 ft. 6 in., tonnage 255 gross, 220 net, 400 d.w.

Province of Quebec Marine.

The s.s. Perreault, which was launched at Roberval, early in August, has been built under subsidies from the Quebec Government and will be operated on Lake St. John.

The Dominion Public Works Department has awarded a contract for repairs to wharf at St. Francois Sud, Isle of Orleans, to S. Ratte, St. Anne de Beauport, at schedule of prices.

The wrecked s.s. Germanicus, which ran aground at Bic Island, last autumn, is reported to have been examined early in August by C.P.R. officials, having in view the possibility of salvaging her. It is said that the cost would be approximately \$400,000.

The Keystone Transportation Co.'s s.s. Keybell struck bottom near the entrance to the Lachine canal, Aug. 20, and sank at the bow. It has been found that the water at the point where the casualty occurred is only 14 ft. deep. The spot has been marked and a notice to ships drawing over 13 ft. 10 in. has been issued.

The Marine Department's s.s. Speedy II is reported to have been sold to T. M. Kirkwood, Montreal. She was built at Leith, Scotland, in 1896, as a private yacht, for Barney Barnato, of the DeBeers Co. of South Africa, and was acquired by the Dominion Government after his death, and operated under the Marine Department. She is screw driven by engine of 88 h.p., and has the following dimensions,—length 115 ft., breadth 20½ ft., depth 10½ ft., tonnage 252 gross, 145 net.

The s.s. C. W. Chamberlain is reported to have been sold to the Sincennes McNaughton Line Ltd., Montreal. She was built of oak, at Walkerville, Ont., in 1881, when she was named C. N. Pratt, and was rebuilt in 1890. Her dimensions are,—length 127 ft., breadth 26½ ft., depth 9 ft. 7 in.; tonnage, 385 gross, 243 net. She is equipped with fore and aft compound engine, with cylinders 18 and 32 in. diam. by 26 in. stroke, 280 i.h.p. at 100 r.p.m., and supplied with steam by a

Scotch boiler 10 ft. diam. by 11 ft. long, at 100 lb. She was at one time owned by the Midland Transportation Co., Midland, Ont., and later by James Swift & Co., Kingston Ont. She was damaged by fire at Cornwall, early this year, since when she was reported to have been owned by Capt. H. Martin, Kingston.

The Sincennes McNaughton Line Ltd., Montreal, has bought the s.s. New Island Wanderer, from Canada Steamship Lines Ltd., and has transferred her from the U.S. register to the Canadian register, under the name of Jeannette R. She was built at Buffalo, N.Y., in 1888, and registered at Alexandria Bay, N.Y. She is of the hurricane deck type, with oak hull, of the following dimensions,—length 116 ft., breadth 21 ft., depth 7 ft.; tonnage, 123 gross, 84 net. She is equipped with fore and aft compound engine, with cylinders 15 and 28 in. diam. by 24 in. stroke, 165 i.h.p. at 100 r.p.m., and is supplied with steam by a fire box boiler 7½ ft. diam. by 10½ ft. long at 135 lb. She was owned originally by the St. Lawrence River Steamboat Co., Kingston, Ont., and was taken over by Canada Steamship Lines Ltd. on its incorporation.

Ontario and the Great Lakes.

P. W. Lyon, Toronto, has been appointed Inspector of hulls, steamboat equipment, boilers and machinery.

The Gulf Navigation Co.'s s.s. Gonzaba, which was built by the Dominion Shipbuilding Co., Toronto, for service in the Gulf of Mexico, sailed from Toronto at the end of July with a cargo of 60 lb. rails for Sagua la Grand, Cuba. This is said to be the first direct ocean cargo shipped from Toronto.

The Dominion Public Works Department will receive tenders as follows:—To Sept. 10, for repairs to superstructure of western breakwater, including headlock, at Port Colborne, Ont. To Sept. 14, for reconstruction of 466 ft. of superstructure of east piers of eastern channel, Toronto harbor.

The Minister of Railways and Canals is reported to have stated, at St. Catharines, Ont., Aug. 23, that the construction of the Welland Ship Canal, which was held up owing to the war, will be pushed to completion at the earliest possible moment. While in the neighborhood he went over the route with some of the engineering staff.

The U.S. Lake Survey reports the stages of the Great Lakes for July, in

Sault Ste. Marie Canals Traffic.

The following commerce passed through the Sault Ste. Marie Canals during July, 1920:

Articles	Canadian		U.S. Canal	Total
	Canal	M. ft. B. M.		
Lumber .....	Eastbound	4,044	29,053	33,097
Flour .....	"	393,590	777,660	1,171,250
Wheat .....	"	1,566,404	6,272,066	7,838,470
Grain, other than wheat.....	"	707,487	2,425,932	3,133,419
Copper .....	"	2,791	5,195	7,986
Iron Ore .....	"	79,768	9,155,318	9,235,086
Pig Iron .....	"	95	95	95
Stone .....	"	1,050	3,200	4,250
General Merchandise .....	"	3,125	6,046	9,171
Passengers .....	"	6,951	3,964	10,915
Coal, soft .....	Westbound	14,975	1,279,187	1,294,162
Coal, hard .....	"	5,600	294,500	300,150
Iron Ore .....	"	8,633	8,633	8,633
Manufactured Iron and Steel..	"	4,369	12,902	17,271
Salt .....	"	1,049	18,464	14,513
Oil .....	"	52,636	52,636	52,636
Stone .....	"	400	56,973	57,373
General Merchandise .....	"	38,406	44,784	83,190
Passengers .....	"	6,699	4,226	10,925
Summary				
Vessel Passages .....	Number	630	2,282	2,912
Registered Tonnage .....	Net	757,587	8,030,832	8,788,419
Freight—Eastbound .....	Short tons	201,570	9,548,131	9,749,701
Westbound .....	Short tons	64,799	1,763,179	1,827,978
Total Freight .....	Short tons	266,369	11,311,310	11,577,679

feet above mean sea level, as follows:— Superior, 602.94; Michigan and Huron, 581.03; St. Clair, 575.63; Erie, 572.63; Ontario, 245.70. Compared with the average July levels for the past 10 years, Superior was 0.50 ft. above; Michigan and Huron, 0.11 ft. above; Erie, 0.19 ft. below, and Ontario, 1.15 ft. below.

The Northern Michigan Transit Co. is reported to have been organized, with office at Detroit, Mich., to take over and operate the properties of Goodrich Transit Co., Wisconsin Steamship Co., Milwaukee Steamship Co., and the Chicago, Racine & Milwaukee Line. The Goodrich Transit Co. owns 9 steamships and a tug; the Wisconsin Steamship Co. one steamship; the Milwaukee Steamship Co. one steamship, and the Chicago, Racine & Milwaukee Line one steamship.

Canada Steamship Lines' s.s. T. P. Phelan, while downbound, with 66,400 bush. of grain, grounded on the Iroquois shoal, in the River St. Lawrence, near Brockville, Aug. 19, and was reported to have been badly damaged. The ship and cargo were valued at \$350,000, which is covered by insurance. The grain was lightered out on Aug. 26, after which she was to be pumped out, when the amount of the damage would be ascertained.

The Montreal Transportation Co.'s barge Quebec, now owned by Canada Steamship Lines Ltd., and which was sunk following the explosion at the Dominion Government grain elevator at Port Colborne, Aug. 9, 1919, has been raised and taken to Toronto, where she has been placed in the drydock for examination and repairs. At the time of the disaster 11 persons on board were killed and 16 injured, while the cargo of grain, valued at \$100,000, was a total loss.

A Port Arthur press report of Aug. 17 stated that the Northern Navigation Co. was about to purchase the s.s. North Land, a passenger ship built in Cleveland, Ohio, in 1895, and that she will be refitted, and placed in operation on the Great Lakes in 1921. The s.s. North Land, which was formerly operated by the Northern Steamship Co., Buffalo, N. Y., between Buffalo, Duluth and Chicago, was cut in two at Buffalo in the autumn of 1919, and reported sold to the Davie Shipbuilding & Repairing Co., Lauzon, Que. The two sections arrived in the St. Lawrence River eventually, after some trouble, one section being placed at Sorel, and the other at Coteau Landing, Que., and we were advised that the ship had been retransferred to the Northern Steamship Co. The last information we were able to obtain as to her movements was on May 10, when we were advised that the stern section had been moved from Coteau Landing to Montreal, pending the receipt of instructions from the Northern Steamship Co.'s directors as to whether she was to be sold as she was, or the two sections joined together again.

Since the foregoing was put in type, we have been advised that the North Land is trading between Canada and France, and that it is believed there is not much possibility of her returning to the Great Lakes.

### Manitoba, Saskatchewan and Alberta.

Dredging in the Red River was commenced about the end of July, the immediate work undertaken being deepening around the wharves within the Winnipeg city limits. This work has been under-

taken at the request of the Winnipeg and St. Boniface Harbor Commission. No dredging has been done there since 1915, and numerous complaints had been made by the shipping interests in the city.

### British Columbia and Pacific Coast.

The s.s. Thomas Crosby, registered at Vancouver, B.C., which has been bought by the Naval Service Department from the Methodist Church Inc., Toronto, has had its name changed to Marfish.

The Grand Trunk Pacific Coast Steamship Co.'s s.s. Prince George was replaced in service Aug. 1, after being overhauled at Prince Rupert, subsequent to running on the rocks in Seymour Narrows during July.

In connection with the death of E. H. Beazley, Manager, Union Steamship Co. of British Columbia, in an aeroplane accident, it is proposed to endow a ward for sick mariners in the local hospital, as a memorial.

During the first half of this year there were shipped from British Columbia 29,000,000 ft. of lumber, and there are orders on hand for approximately 36,000,000 ft., for South Africa, South America, Australia, New Zealand and the United Kingdom.

The Canadian Robert Dollar Co.'s s.s. M.S. Dollar sailed from Vancouver, B.C., recently, with what is stated to be the largest general cargo on one ship from the port for the Orient. The total weight of cargo was 14,000 tons, of which about 6,000 tons were lumber.

The Vancouver Harbor Commissioners have deposited with the Public Works Department at Ottawa a description of the site and plans of the Ballantyne pier, to be built on the south shore of Burrard Inlet, on a water lot east of the west boundary on Heatley Ave. produced northerly.

The C.P.R. is reported to have placed a contract with Wallace Shipyards Ltd., North Vancouver, B.C., for the construction of a steamship to replace the s.s. Princess Sophia, which was wrecked and lost with all her passengers and crew, on Vanderbilt Reef in the Portland Canal, at the end of 1918. It is stated that the contract price is about \$1,500,000, that she will be 325 ft. long, with a speed of 17 knots, and that she will be placed in the Alaska service, for which she is to be specially built.

D. C. Coleman, Vice President, Western Lines, C.P.R., is reported to have stated in Vancouver recently that J. W. Troup, Manager, British Columbia Coast Service, C.P.R., Victoria, would make an announcement shortly regarding the building of a steamship to replace the s.s. Princess Sophia, which was lost in the Portland Canal at the end of 1918. If it is decided to build a steamship, she will be larger than the Princess Sophia, tion, suitable for Alaska service. Tenders have been received for the building, two from British Columbia builders, and a third was expected, when a decision would be arrived at.

The Lord Beatty Ltd. has been incorporated under the New Brunswick Companies Act, with \$25,000 authorized capital and office at St. John, to purchase the s.s. Lord Beatty and to carry on a general towing, salving and wrecking business. The incorporators are: T. Nagle, C. M. Kernson, and T. A. Linton, St. John, N.B.

### New Steamship for Toronto-Niagara River Line.

J. W. Norcross, President, Canada Steamship Lines Ltd. during an interview gave out the following statement in Toronto Aug. 25:—"The plans and specifications for the new steamship for the Toronto-Niagara-River line are completed, and the steel had been ordered. It is the company's intention to have the construction commenced at once and the ship ready for the summer season of 1921. This is to be the first of the new series of passenger ships that the Canada Steamship Lines contemplates building, and will embody all the best points of modern construction. The principal dimensions will be 410 ft. long, by a width of 70 ft. over the guards, and her carrying capacity will be 4,000 persons, which is twice the present carrying capacity of the s.s. Cayuga, on the same run. The entire construction of the ship will be of steel, and no wood will be used, the interior finish being of pressed steel, and the decorations after the most improved style. There will be four decks, and also a very large restaurant, and special attention will be paid to the allotment of dancing space, so that ample room will be provided for all. There will be a spacious moving picture theatre, and continuous entertainments will be put on. There will also be a children's playground, with competent attendants in charge, which will leave the mothers free from the responsibility of watching their little ones. The ship will be propelled by geared turbine engines of the latest design, and will develop a shaft horsepower of over 6,000, enabling the development of a speed of 22 knots an hour. Special attention has been paid to all details and the arrangements for the accommodation of the public. The deck space, designs and construction will be not only superior to, but far in advance of, anything that is now afloat, or under construction, for passenger carrying on fresh water."

The plans have been prepared by A. Angstrom, naval architect, Toronto. No announcement has been made as to where the ship will be built, but it will almost certainly be by one of the shipbuilding companies which are being merged into the British Empire Steel Corporation, probably the Collingwood Shipbuilding Co., Collingwood, Ont. On account of Welland Canal limitations, the ship, if built in Collingwood, would have to be brought through the canal in sections, probably on their sides, and even that might not be practicable, and it is more likely that the fabricating will be done in Collingwood and the assembling, etc., in Toronto.

North American Steamship Co. Ltd. has been incorporated under the Dominion Companies Act, with \$750,000 authorized capital and office at Toronto, to operate freight and passenger steamships, and to carry on general navigation, transportation and other allied businesses. The incorporators are: M. L. Gordon, J. S. Duggan, J. W. Bicknell, T. S. H. Giles and M. H. MacGregor, Toronto.

European Steamship Agencies (Toronto) Ltd. has been incorporated under the Ontario Companies Act, with \$40,000 authorized capital and office at Toronto, to carry on business as insurance brokers, steamship and transportation agents, etc. The provisional directors are H. and R. Goad, and S. and R. Peiman.

## Wreck Commissioner's Enquiries and Judgments.

Enquiries have been held and judgments delivered in connection with the following marine casualties:—

### Margaret Hackett-Brookdale Collision.

Held at Montreal, July 30, before Capt. L. A. Demers, Dominion Wreck Commissioner, assisted by Capt. C. Lapierre and C. J. Stuart, as nautical assessors, into the cause of the collision of the George Hall Coal Co.'s tug Margaret Hackett, and barge Gladys H. in tow, with the Canada Steamship Lines' barge Brookdale, in tow of the same company's s.s. Maplehurst, near buoy 25, Lake St. Peter, July 16. The court found that the mate, O. Portelance, of the tug Margaret Hackett, was solely responsible for the casualty, and though he is not required to carry a certificate as mate of a tug, he was judged unfit to hold the certificate he has, as master of a tug, and it was cancelled. The master of the tug Margaret Hackett, W. Allison, was exonerated from all blame, but he was criticized for sailing the tug until she sank in deep water, instead of selecting a shallow spot. The barges Brookdale and Gladys H. were exonerated from blame, but the officers were advised to keep a better lookout in future. The s.s. Maplehurst was also exonerated, but the master, K. LaRush, was found in default for not carrying properly constructed lights in accordance with article 3 of the International Rules of the Road, and was severely reprimanded. He was also censured for not making more enquiries into the condition of his barge and the tug Margaret Hackett, as had there been any loss of life, the court would have held him criminally responsible. The pilot, J. S. Raymond, was cautioned that it is essential for him, and all pilots, to ascertain for themselves the condition of the navigational lights of ships they are piloting, also of the tow, if any. The mate of the s.s. Maplehurst was cautioned to keep his watch on the bridge, and to bear in mind constantly his responsibilities as an officer. The court recommended to all concerned, a stricter supervision and examination of aids to navigation and their equipment.

### Appeal re Stranding and Loss of s.s. Chelston.

In connection with the stranding of the British s.s. Chelston, at St. Paul's Island, in the Gulf of St. Lawrence, Oct. 9, 1919, the master of the ship, Capt. A. M. Fotheringham appealed, in the Admiralty Division of the English High Court, against the decision of the Dominion Wreck Commissioner, concurred in by the two nautical assessors, by which he was held to have erred gravely in judgment, and his certificate suspended for three months. The judgment on the appeal stated that questions of principle were raised which might have far reaching consequences, and in particular that there was a challenge of the powers of the Canadian Parliament to make amendments of the Merchants Shipping Act, as done by the Canada Shipping Act of 1908, so far as they affect certificates of British masters. There was also the question as to whether the rules made by the Dominion Marine Department, which governed procedure in Canada under the Merchants Shipping Act, provided sufficiently for the protection of mariners implicated by charges. The most substantial ground of the appeal was that the master had no notice of the charges on which his certificate was dealt with.

There was a further point that the Canadian procedure did not satisfy the requirements of the British law, and was ineffective to sustain a finding that prejudiced a master's certificate. In the court's view the rules made by the Lord Chancellor were rules governing procedure in British wreck commissioners' courts, and the rights of British shipmasters in Canadian courts were to be ascertained by considering whether the provisions of the Canadian Parliament diminished in any way the safeguards of the masters' interests, which were afforded by British legislation. In the court's view, they did not, but on the contrary Canadian legislation amply protected the rights of British shipmasters. The case was merely the efficacy of the procedure of the Canadian statutes to give the protection. Sec. 36 of the Canada Shipping Amendment Act 1908 provides that a certificate shall not be cancelled or suspended unless the holder of such certificate has an opportunity of making his defence. No charge was presented against the master, and the first notice he had of such a charge was the finding of the court that he was guilty. Therefore the appeal must be allowed, and the master's certificate restored, free from any suspension.

## Canadian Notices to Mariners.

The Marine Department has issued the following:—

**New Brunswick.**—The fixed red light on the north side of the gully at South Tracadie, in the Gulf of St. Lawrence, will be discontinued about Sept. 1.

The Kouchibouguac bar range lights in Kouchibouguac Bay, Northumberland Strait, have been changed in position, as follows: The front range light on the east side of south beach has been moved about 212 ft. north of its old position, and the back light about 32 ft. north of its old position and 365 ft. from the front light.

**Nova Scotia.**—The Public Works Department has dredged a channel 750 x 35 ft. with a least depth of 6 ft., from the main channel to the fishing boat anchorage in Fourchu Harbor, Cape Breton Island.

During the past season the channel in the East River, from Chambers point to New Glasgow, was dredged by the Public Works Department, to a least depth of 10 ft. The dredged channel, following the course of the river, is 38 ft. wide, with a turning basin in front of the government wharf at New Glasgow, 400 x 100 ft.

The light ship maintained on Lurcher shoal, off Yarmouth, will, without further notice, be removed from her station, about Sept. 15, to undergo repairs, pending which, her station will be marked by a gas buoy, painted red and showing an occulting white light. The ship will be off her station about four weeks, and further notice will be given when repairs have been completed and the ship replaced in position.

Back range light has been established at Grand Etang, on the west coast of Cape Breton Island, on the breakwater, 367 ft. from the existing light on the outer end of the breakwater. The light, which is fixed red, is shown from a locomotive headlight lantern at an elevation of 34 ft., with a visibility of 6 miles, and is mounted on a white pole with a white shed at base, 30 ft. high.

**Quebec.**—The Public Works Department has dredged the basin on the east side of the Government wharf at Mur-

ray Bay, to a depth of 15 ft., 100 ft. wide in line with the front face of the wharf, and extended shoreward 340 ft., 72 ft. wide at the inner end.

**Ontario.**—A red wooden spar buoy has been established on the north side of the St. Marys River channel at Sault Ste. Marie, about 1,100 ft. eastward of government wharf, in a depth of 21 ft.

The fog bell and auxiliary hand fog horn, about 300 ft. west from the east extreme of Davieaux Island, on the south side of Michipicoten Island, Lake Superior, will be discontinued without further notice.

The red gas buoy 64F, in 18 ft. of water, one mile east of South Lancaster, in Lake St. Francis, River St. Lawrence, will be discontinued without further notice.

L'Orignal wharf having been destroyed by fire, the fixed white electric light, on a shelf on the gable end of a brown wooden freight shed, on the outer end of the wharf, will be discontinued until further notice.

A red wooden spar buoy has been established on edge of shoal, about 55 ft. east from east side of government wharf, Brockville.

**Newfoundland.**—The diaphone fog alarm, which is operated by air, compressed by an oil engine, and which gives three blasts of 1¼ sec. every 90 sec., at Bonavista Cape, Bonavista Bay, on the east coast, has been moved to the mainland, on the south side of the lighthouse.

On the summit of Little Denier in Bonavista Bay, an occulting white light has been replaced by a flashing white light, giving a flash of 3 seconds every 30 seconds.

A flashing white acetylene gas light, showing a flash of 0.3 sec. duration every 3 seconds, has been established about 130 yd. from the northwest end of Eagle Island, Bay of Islands. The light is at an elevation of 109 ft. and consists of a white structure of open frame work surmounted by a red lantern.

**United States.**—A steel conical buoy, 17A, showing an occulting white light, has been established in 3 fathoms, off Whisky Island shoal, River St. Lawrence.

**Vancouver Drydock.**—In reference to the Vancouver press dispatch of July 21, referred to in Canadian Railway and Marine World for August, stating that the contract between the Dominion Government and J. Coughlan & Sons, for building a drydock on Burrard Inlet had been signed, and that work would be started in 60 days thereafter, we were officially advised July 27 that the agreement had not been executed, as the contractors were re-arranging the layout of plant and site, which would require the approval of new plans and specifications.

**Cuban Port Congestion.**—Major H. A. Chisholm, Canadian Government Trade Commissioner at Havana, Cuba, wrote recently that so serious has Cuban port congestion become that a commission of 17 U.S. shipping men was due to arrive in Havana within a few days to go thoroughly into the problems of the port and make recommendations for the solution of the difficulties. Ships have sometimes been held up in Havana harbor for two or three months at a time.

**U. S. Steamship Rates.**—The Interstate Commerce Commission has authorized steamship lines, subject to its jurisdiction, to increase their rates to the same extent as railways have to be authorized to do between the same points or in the same territory.

### Panama Canal Traffic.

During the fiscal year ended June 30, the volume of traffic passing through the Panama Canal exceeded that in any previous 12 months. A total of 2,478 commercial ships made the transit, as compared with 2,025 in the fiscal year 1918-19, 2,130 in the fiscal year 1917-18, and 2,134 in the calendar year 1919. The aggregate net tonnage of the commercial ships passing through the canal in the fiscal year 1920 was 8,545,653 tons, according to the Panama Canal rules of measurement. In the fiscal year 1918-19, the aggregate was 6,131,575 net tons. In addition to the traffic of commercial ships, 266 ships passed through the canal in the U.S. Government Service without the payment of tolls. In revenues and in earnings in excess of expenses of operation and maintenance, new records were, likewise, established during the past fiscal year. The summation of charges has not been completed in detail, but the figures indicate aggregate revenues approximating \$8,800,000 during the year. Expenses of operation and maintenance total about \$6,650,000. No profit has been made in a commercial sense, since there is no consideration here of interest charges on the investment or of the depreciation of the plant. The previous record for a year for revenues was made in the fiscal year 1918, viz., \$6,411,843.28. In that year the excess of revenues over expenses was \$491,500.34, being greater than that in any fiscal year prior to 1919-1920.

### Transportation Associations, Clubs, Etc.

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

- American Association of Port Authorities. M. 9 Beaver Hall Square, Montreal.
- Belleville Railway Men's Educational Club. Meets each Tuesday, 7.30 p.m. F. A. Pinkston, Belleville, Ont.
- Canadian Car Service Bureau—W. J. Collins, Manager, 401 St. Nicholas Building, Montreal.
- Canadian Electric Railway Association—A. Eastman, 70 Bond Street, Toronto.
- Canada Freight Association (Eastern lines)—G. C. Ransom, 909 Shaughnessy Bldg., Montreal.
- Canadian Freight Association (Western Lines)—W. E. Campbell, 805 Boyd Block, Winnipeg.
- Canadian Railway Board of Adjustment No. 1—R. Chapple, 463 St. James Street, Montreal.
- Canadian Railway Club—W. A. Booth, 131 Charron St., Montreal. Meetings at Montreal 2nd Tuesday, each month, 8.30 p.m., except June, July and August.
- Canadian Traffic League, A. H. Thorpe, 25 Balsam Ave., Toronto.
- Dominion Marine Association—F. King, Counsel, Kingston, Ont.
- Canadian Ticket Agents' Association—E. de la Hooke, London, Ont.
- Eastern Canadian Passenger Association—G. H. Webster, 54 Beaver Hall Hill, Montreal.
- Engineers' Club of Montreal—C. M. Strange, 9 Beaver Hall Square, Montreal.
- Engineers' Club of Toronto—R. B. Wolsley, 94 King Street West, Toronto.
- Engineering Institute of Canada—F. S. Keith, 176 Mansfield St., Montreal.
- Express Traffic Association of Canada—C. N. Ham, Montreal.
- Great Lakes and St. Lawrence River Rate Committee—A. E. Storey, 310 G.T.R. General Offices, Montreal.
- Hydro-Electric Railway Association of Ontario—T. J. Hannigan, Guelph, Ont.
- International Water Lines Passenger Association—M. R. Nelson, 89 Chatham Ave., Buffalo, N.Y.
- Niagara Frontier Summer Rate Committee—James Morrison, Montreal.
- Quebec Transportation Club—A. F. Dion, Harbor Commissioner's Office, Quebec, Que.
- Railway Association of Canada—C. P. Riddell, Montreal.
- Shipping Federation of Canada—Thos. Robb, Manager, 42 St. Sacramento Street, Montreal.
- Transportation Club of Toronto—W. A. Gray, 257 Roxton Road, Toronto.
- Transportation Club of Vancouver—C. E. Blaney, Travelling Passenger Agent, Canadian Pacific Ocean Services Ltd., Vancouver, B.C.

### Transportation Conventions in 1920

- Oct. 5-7—Maintenance of Way Master Painters' Association, Detroit, Mich.
- Oct. 11 to 15.—American Electric Railway Accountants Association, Atlantic City, N.J.
- Oct. 11 to 15.—American Electric Railway Engineering Association, Atlantic City, N.J.
- Oct. 11 to 15.—American Electric Railway Transportation and Traffic Association, Atlantic City, N.J.
- Oct. 14, 15.—American Association of Passenger Traffic Officers, Chicago, Ill.
- Oct. 19-21.—American Railway Bridge and Building Association, Atlanta, Ga.

### 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 Holden Co. Ltd., Montreal, has been granted supplementary letters patent, increasing its authorized capital stock from \$250,000 to \$1,000,000.

Independent Pneumatic Tool Co., Chicago, Ill., has issued circular 33, describing and illustrating Thor universal electric drills.

Joliette Castings & Forgings Ltd., which was incorporated July 3, under the Dominion Companies Act, with authorized capital of \$1,000,000, and head office at Montreal, has taken over the businesses of F. E. Smith Ltd., Independent Steel Specialties Corporation Ltd., Montreal, and Joliette Steel Co. Ltd., Joliette, Que., with head office at Montreal and works at Joliette. The President, F. E. Smith, was at one time Manager, Canadian Steel Foundries, Montreal, resigning Aug., 1918, to establish F. E. Smith Ltd., which dealt in iron and steel refractories, mill, foundry, shipbuilding and railway supplies, and pneumatic tools, and who in Mar., 1920, incorporated Independent Steel Specialties Corporation Ltd., for the production of steel castings. The Vice President is W. A. McCallum, formerly Assistant to President, Canadian Tube & Iron Co., and the Secretary is M. J. Mervin, formerly Auditor, Sterling Bank. The new company is manufacturing steel castings for railway, shipbuilding and automobile works, also general machinery castings. It is putting in an electrical furnace with a capacity of 400 tons a month.

Metal & Thermit Corporation, New

York, N.Y., is manufacturing an improved tool wagon for holding and keeping together materials and appliances for Thermit welding, which it recommends to railway shops using the Thermit process. The new design of tool wagon is claimed to be an improvement over the old design recommended formerly, as it provides a place for the Thermit preheater (lacking in the old design) side by side with the crucible. As in the case of the old tool wagon, the new one also contains a tool box for all necessary tools, space for mold boxes and a bin for molding material, divided into two parts, the upper one for facing material and the lower one for backing material. A sand screen is provided in the lower part of the lid for screening molding material, when a mold is broken up to prepare it for the next weld. During the screening of sand this lid is closed. The wagon is 42 in. wide, 57 in. high to the top of the tool box, and its length, exclusive of handle, is 7 ft. 5 in.

The Superheater Co. Ltd. has been incorporated in Canada. Its main office is in the Transportation Building, Montreal, and its manufacturing plant is at Sherbrooke, Que. It will manufacture the type of fire tube superheaters now in general use on locomotives, and also fire tube superheaters for marine installation, of which there are now over 2,000 in service. In the case of water tube boilers for marine service, the company designs and manufactures the superheater to suit each individual case. This, in fact, applies in all cases, and in particular in the design and construction of superheaters for stationary installation, either water tube, fire tube, or separately fired. The conditions are studied in each case, with a view to supplying the most economical and effective installation. The company uses a form of return bend, which is made, by a forging process, from the metal of the superheater pipes, making an exceptionally strong construction which is proof against high temperatures. This form of return bend has also been considerably sought after for use in pipe coils for refrigerating purposes, condensers and other uses.

Vapor Car Heating Co. of Canada, 61 Dalhousie St., Montreal, has issued a catalogue, 22, showing of its car heating and ventilating apparatus, describing and illustrating the vapor system of car heating and other devices, including cab heating systems, steam and hot water car heating apparatus, etc., are manufactured formerly by Chicago Car Heating Co., Standard Heat & Ventilation Co. and Safety Car Heating & Lighting Co.

## CRANE FLANGED FITTINGS

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