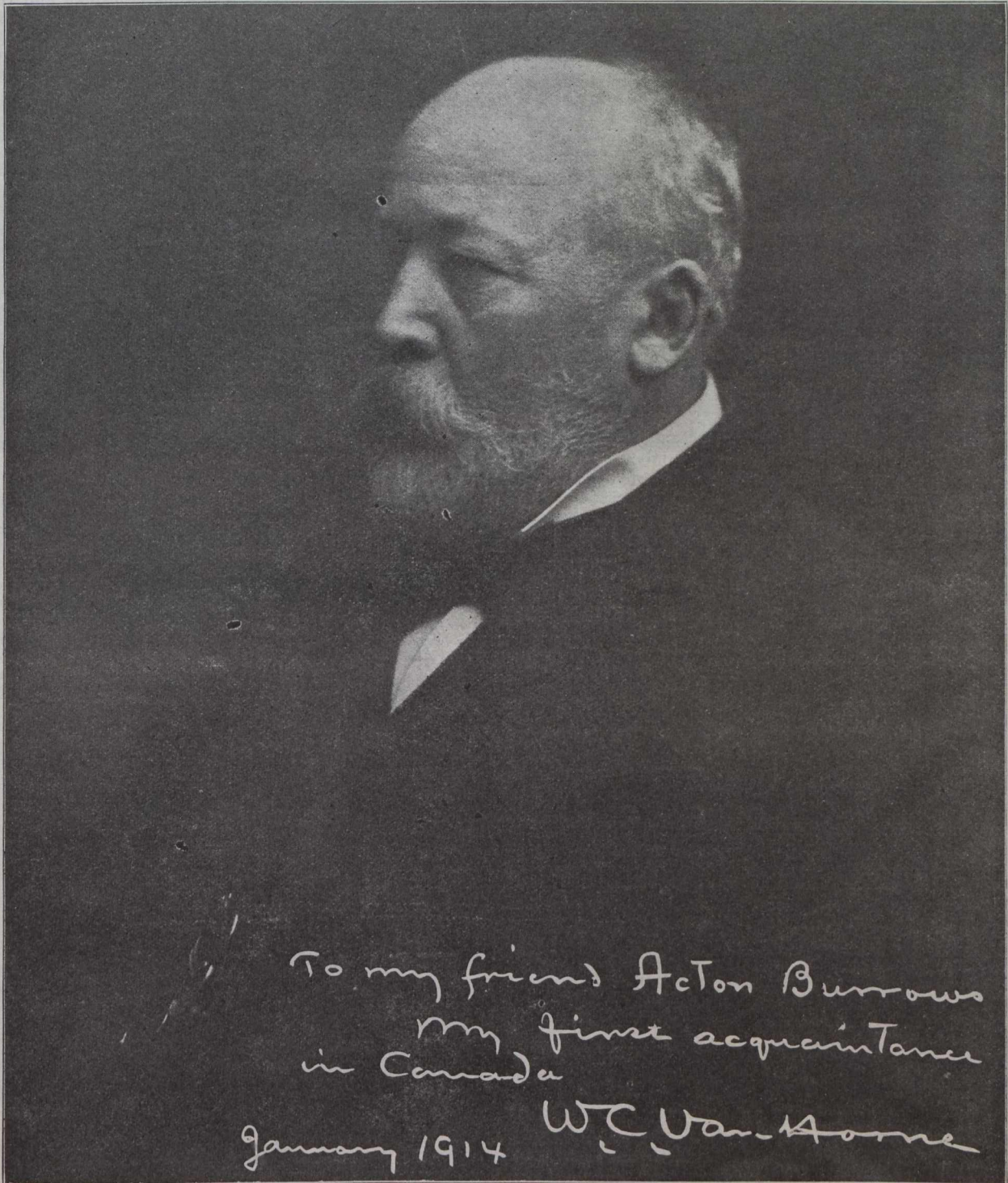


# Canadian Railway and Marine World

October, 1915.



SIR WILLIAM CORNELIUS VAN HORNE, K.C.M.G.,

Born February 3, 1843. Died September 11, 1915.

From an autographed photograph given the Managing Director of Canadian Railway and Marine World in January 1914.

## Freight Cars for European Continental Service Being Built in Canada.

The British Government is having built by the National Steel Car Co. at Hamilton, Ont., for service in France and Belgium, 1,300 steel frame covered cars of the M. M. Nord type, which are largely used in some parts of the European continent. One hundred of them are being provided with accommodation at one end for a brakeman on guard. The principal dimensions of the 1,200 cars are as follows:—

Length over end sills	25 ft. 3 5-32 ins.
Width over side sills	8 ft. 7 15-16 ins.
Length over buffers, free	28 ft. 5 1/8 ins.
Length over buffers, compressed	27 ft. 11 7-16 ins.
Length over pulling face of draw hooks	26 ft. 5 1/2 ins.
Wheel base	11 ft. 7 25-32 ins.
Height from rail to centre of buffers and draft gear	3 ft. 5 3-16 ins.
Height from rail to top of floor	4 ft. 0 1-32 ins.
Height from rail to top of roof caps	12 ft. 0 29-32 ins.
Total length over roof	25 ft. 5 1/8 ins.
Total width over roof	9 ft. 2 13-32 ins.
Inside dimensions—	
Clear length between end protection boards	24 ft. 11 7-32 ins.
Clear width, between base boards	8 ft. 4 ins.
Clear height under leg of inside plate tee	7 ft. 1 19-32 ins.
Clear height of door opening	6 ft. 11 3/4 ins.
Clear width of door opening	4 ft. 11 1-16 ins.
Cubic capacity	1482 cu. ft.

The cars are mounted on 4 rolled steel wheel 40 15-16 ins. dia. on tread line and forged steel axles with 5 1/2 x 11 11-32 in. journals placed at 6 ft. 7 23-32 ins. centres. The journal boxes are of cast steel and are equipped with cast steel covers bolted on malleable iron oil reservoirs, arranged to be filled from outside and provided with oil pad, spring and wick, also bronze bearing, cast steel wedge and wood dust guard. The pedestals are of cast steel with forged tie bars. The bearing springs are of semi-elliptic type and rest on top of the journal box, being connected to the car by means of forged links attached to spring ends and cast steel brackets secured to car sills. The brake gear is operated by hand only, by means of two long levers, one at each diagonally opposite end of car, two wheels only being braked through cast steel brake heads, provided with oak blocks, each being operated independently of the other. The buffers are of the plunger type with volute springs, each having a total compression of 2 27-32 ins. The draw gear is composed of a forged steel draw hook with shank secured to a cast steel compression washer by means of a chrome nickel steel key. Between the compression washer and a steel bearing casting secured to end sill is a volute compression spring, connection with another car made by a screw coupling and shackle.

**CONSTRUCTION OF CAR UNDER-FRAME**—Pedestal sills:—Two 10 in. 30 lb. I-beams continuous between inside of end sill webs into which they are coped and connected to end sills by means of a 17 x 3/4 in. end sill top cover, an 8 1/2 x 3/8 in. end sill bottom cover and a cast steel angle connection of substantial design. End sills:—Two 10 in. 27.2 lb. ship channels continuous between inside of flange of corner post angle. Crossties:—Near ends of car, two 10 in. 21.8 lb. ship channels, continuous between inside of webs of pedestal sills into which they are coped, connections being made by 5-16 in. top and bottom gussets and 4 x 4 x 3/8 in. angle connections. Crossties:—Near centre and intermediate, three 6 in. 12.5 lb. ship channels, continuous between and coped into pedestal sills and connected to them by 5-16 in. gussets, bottom, and 4 x 4 x 3/8 in. angle connections, the middle part of the upper

flange is provided with a 7 x 3/8 in. cover plate 3 ft. 1 1/4 in. long. Centre sills:—At end, two 10 in. 25 lb. I-beams at each end, coped into end sill and end cross tie respectively, connected to end sill top and bottom cover and to cross tie top and bottom 5-16 in. gussets, also connected to end sill and cross tie webs with 4 x 4 x 3/8 in. angle connections. Floor stringers:—Two 3 in. 7.1 lb. ship channels continuous between backs of each cross ties, and connected to cross tie gussets and top cover plates. Side sills, 4 x 3 x 3/8 in. angles continuous between and coped into inside of end sill web. The side sills are supported for their length between end sills by cast steel extension brackets. These being riveted to the pedestal sills. Floorboards:—1,25-32 in. thick with plane joints in angle formed by flooring and siding is secured a base board 31-32 in. thick.

**CONSTRUCTION OF CAR SUPER-STRUCTURE**—Side posts:—Three per side, 3 in. x 7.1 lb. ship channel. Door stop posts:—Composed of 1 per side, 5 3/4 ft. structural channel with 4 1/2 x 3 x 3/8 in. angle riveted to web, long leg of angle turned out to form a door stop. All the above posts are secured at their lower end to the side sill angle and extension casting. Corner posts:—4 x 4 x 3/8 in. angle. Each portion of side frame between side door and corner posts is provided with a 3 1/4 x 5-16 in. brace secured to side sill against door post and to side post and corner post. End posts:—4 x 4 in. x 10.5 lb. tee, 2 per end. Side plate:—4 x 2 in. x 6.7 lb. tee continuous between inside flange of corner post angle. Side and end sheathing of 31-32 in. tongued and grooved boards. Side door is of the sliding type with bottom corners provided with brackets and rollers and arranged to run along the tee track. The top corners of the door are provided with eye castings arranged to fit over and slide along a guide rod. A shutter of pressed steel no. 20 gauge is arranged in upper right hand portion of side door, the bottom edge of shutter is equipped with hinges to enable it to be swung out and down. The door framing consists of 2 1/4 x 2 1/4 x 1/4 in. angles with a centre vertical stiffener of 3-16 in. pressed plate at centre.

**CONSTRUCTION OF CAR ROOF**—The roof is of the camber type, having a carline radius of 15 ft. 6 15-16 ins. Carlines:—12 per car, including end carlines 2 1/4 x 2 1/4 x 5-16 in. angle, vertical leg being bent to form connection to side plate—in addition to plate connection—the other leg carried over side plate to support eaves. Roof boards laid longitudinally and secured direct to carlines. Roof covering of no. 22 gauge galvanized iron.

Regarding the 100 cars mentioned in the opening paragraph, the chief difference is in the accommodation for the brakeman. The principal dimensions and features that differ from the 1,200 cars are as follows,—

Height from rail to centre of buffers and draft gear at brake box end	3 ft. 4 25-32 ins.
Height from rail to top of brake box roof	13 ft. 1 29-32 ins.
Total length over main roof	23 ft. 9 27-32 ins.
Total length over main roof, including brake box	25 ft. 9 21-32 ins.
Inside dimensions—	
Clear length between end protection boards	23 ft. 3 17-32 ins.
Cubic capacity	1386 cu. ft.

The brake gear is operated by hand only from one end to brake mast provided with a spiral worm. This actuates a series of levers, all wheels being equipped with two each, combined brake head and shoe. Both kinds of car are equipped with footboards below each side door opening, brackets for

signals and lamps, end safety chains and suitable hooks and chains, etc., inside car for securing cattle or merchandise.

## List of Canadian Northern Pacific Railway Stations.

Following is a list of station points between Port Mann, B. C., and Yellowhead Pass, showing the mileage of each from New Westminster bridge and the altitudes. The class of station to be built is shown by the figures immediately after the names of the stations:—1 designates a special station; 2, a third class station; 3, combined station and shelter house; 4, section house; 5, shelter; 6, future siding; D. p., division point:—

Mileage.	Stations.	Altitudes.
4.0	Port Mann, 1	16
10.7	Port Kells	26
14.7	Langley, 2	24
20.0	Glen Valley, 5	24
20.5	Mount Lehman, 5	31
25.5	Matsqui, 2	24
35.9	Sumas, 5	36
41.4	Arnold, 5	31
46.2	Rosidewack, 1	36
52.7	Rosedale, 2	52
57.0	Cheam	80
63.8	Riley, 3	101
68.2	Laidlaw, 3	96
70.0	St. Elmo, 5	106
73.9	Floods	119
77.5	Hope, 1	157
82.0	Trafalgar Bar	162
86.3	Squeah	187
91.2	Yale, 3	220
99.7	Stout	282
105.3	Chapmans Bar, 3	355
118.3	Boston Bar, 1, D.p.	452
124.2	Boothroyd, 4	519
128.2	Inkitsaph, 6	568
113.5	Falls Creek, 4	606
139.5	Cisco	604
145.7	Lytton, 2	568
152.5	Gossett, 4	626
160.4	Seddell, 3	702
164.5	Scoonka	721
168.7	Spences Bridge, 2	740
174.5	Martel, 4	803
178.2	Minnabarriet, 6	854
185.0	Basque, 3	900
194.9	Ashcroft, 2	995
202.6	McAbee, 3	1,031
207.3	Anglesey	1,078
211.0	Walhachin, 3	1,086
218.0	Savona, 3	1,173
222.9	Copper Creek	1,171
230.0	Cox, 3	1,171
235.7	Tranquille, 3	1,183
244.0	Kamloops Jct., 1, D.p.	1,153
250.8	St. Paul, 3	1,172
258.3	Hefferley, 3	1,185
266.6	McLure, 3	1,188
274.8	Louis Creek, 3	1,232
285.1	Genier, 3	1,256
292.2	Chu-cha, 2	1,280
300.6	Boulder Creek, 3	1,289
309.3	Mosquito Flats, 3	1,310
315.0	Clearwater Crossing, 3	1,338
321.6	Birch Island, 3	1,394
330.0	Vavenby, 3	1,543
335.7	John Irvine, 3	1,638
345.8	McMurphy, 3	1,793
353.3	Wire Cache, 3	1,899
358.2	Avola, 3	1,903
364.6	Cottonwood Flats	2,008
369.5	Messiter, 3	2,082
375.2	Wolfenden, 3	2,179
379.0	Trout Creek, 6	2,196
383.3	Blue River, 1, D.p.	2,244
393.0	Thunder River, 3	2,265
401.6	Pyrampid Creek, 3	2,315
409.2	Levendors, 3	2,376
418.9	Clemina, 3	2,684
424	Albreda, 3	2,801
432.8	Canoe River	2,713
437.5	Cranberry, 6	2,648
443.5	Swift Creek	2,603
450	Jackman	2,821
458	Morey	3,056
464	Mount Robson	3,241
470	Resplendent	3,415
478	Rainbow	3,396
485	Grantbrook	3,451
494	Tucerne, 1, D.p.	3,647
499	Yellowhead	3,708

We are indebted to T. H. White, Chief Engineer, Canadian Northern Pacific Railway, for the foregoing.

The Inn, St. Andrews, N.B., which closed for the season on Sept. 15, will not be operated as one of the Canadian Pacific Ry.'s hotels in future. The C.P.R. will, of course, continue to operate the Algonquin Hotel, St. Andrews.

# Canadian Pacific Railway Terminal Improvements at Quebec.

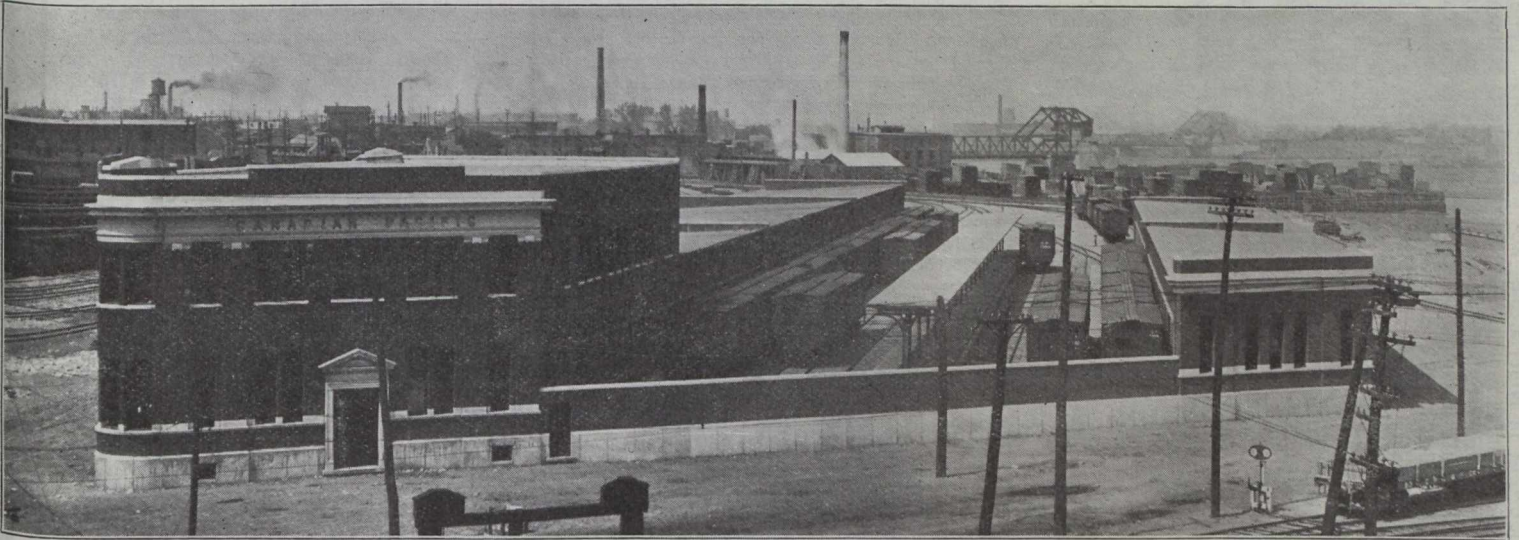
The entire remodelling and extension of the C.P.R. passenger and freight facilities on the Palais grounds at Quebec became necessary some little time ago on account of the normal growth of business, and to their proposed use by both the C.P.R. and the National Transcontinental Ry. as a union terminal. The work which is shown on the accompanying plan was started dur-

and will stub-end toward the extension of Ramsay St. The common working and set off tracks for this yard and the wharf tracks will be built between the two and connect with the main tracks well to the west, in order to reduce to a minimum the interference of freight movements with the throat of the passenger station yard.

The new freight sheds are complete and

baggage, mail and express facilities in the west wing.

The station yard will include for the present eight stub end tracks, varying in capacity from 7 to 10 cars and a locomotive, and three through tracks varying from twelve to fourteen cars and an engine. The through tracks are provided for handling pilgrimage trains which run through to



Canadian Pacific Railway Freight Terminals in the City of Quebec.

The building to the left, at the rear of the office building, is the inbound freight shed; the building to the right is the outbound freight shed.

ing the summer of 1914, and is being carried out in such a manner as to keep all facilities in full service. The construction of the new freight facilities released the old ones; these were demolished to make room for the new passenger station, and when that is completed the existing station will be removed to permit of the construction of the passenger car yard. It is intended to have the work all completed by the summer of 1917.

in service. The outbound shed is 30 ft. wide and 360 ft. long, and the inbound shed proper is 50 ft. wide and 460 ft. long, the balance of its length being given over to a 2-story office building. Each shed is served by three tracks, the outbound having a capacity of 27 cars, and the inbound a capacity of 39 cars, while a trucking platform between the two sets of tracks permits of their ready use for less than car lot transfer purposes. The sheds are so

St. Anne de Beaupre, and for such trains as may at some future time run through to the National Transcontinental Champlain Market Station by this route.

The tracks are arranged in pairs at 13 ft. centres, with 18 ft. combination baggage and passenger platforms between pairs. The southerly track will be reserved for handling car load baggage and express business. Space has been left for future additional tracks between the present stub tracks and



Canadian Pacific Railway Freight Terminals in the City of Quebec.

The building to the left is the inbound freight shed, the office building is in the centre of the illustration, and part of the outbound freight shed is shown at the right.

The track leading to the Louise Embankment and the Empress Wharves is to be relocated some 400 ft. to the north, partly on ground reclaimed from the St. Charles River. This will give a more direct route to the waterfront, and also permit of constructing the new team yard in such a position that teams need not cross the heavy train movement to and from the wharves. This team yard, of about 105 cars capacity, will also be built on the reclaimed ground,

located that they may at any time in the future be increased in length as more capacity is required.

The new passenger station, which is under construction, is located on the site of the old freight sheds. The ticket offices, baggage checking counters, and similar public facilities will be located in the portion of the building fronting on the proposed plaza. The waiting rooms and accessories will be in the north wing, and the

the baggage wing of the station, and between the through tracks and the freight sheds.

The passenger car yard stub ending toward St. Paul St. will have a capacity of 130 cars. Its construction has not yet been started, as it will be on the site of the present station and station yard. The heating of this yard, the station and station yard and the freight sheds will all be handled from a central power house located just

west of the baggage wing of the station. The ice house on St. Roch St. is intended to provide both for the railway requirements and for the Chateau Frontenac.

For the foregoing information and the accompanying ground plan we are indebted to J. M. R. Fairbairn, Assistant Chief Engineer, Eastern Lines, C.P.R. For the photographs of the freight terminals we are indebted to the W. S. Downing-Cook Co., Montreal, who were the contractors for the freight sheds and office building and also have the contract for the passenger station. D. H. Mapes, Engineer of Buildings, C.P.R., was in charge of construction of the freight buildings and also has charge of the passenger station construction.

### The United States Government Railway in Alaska.

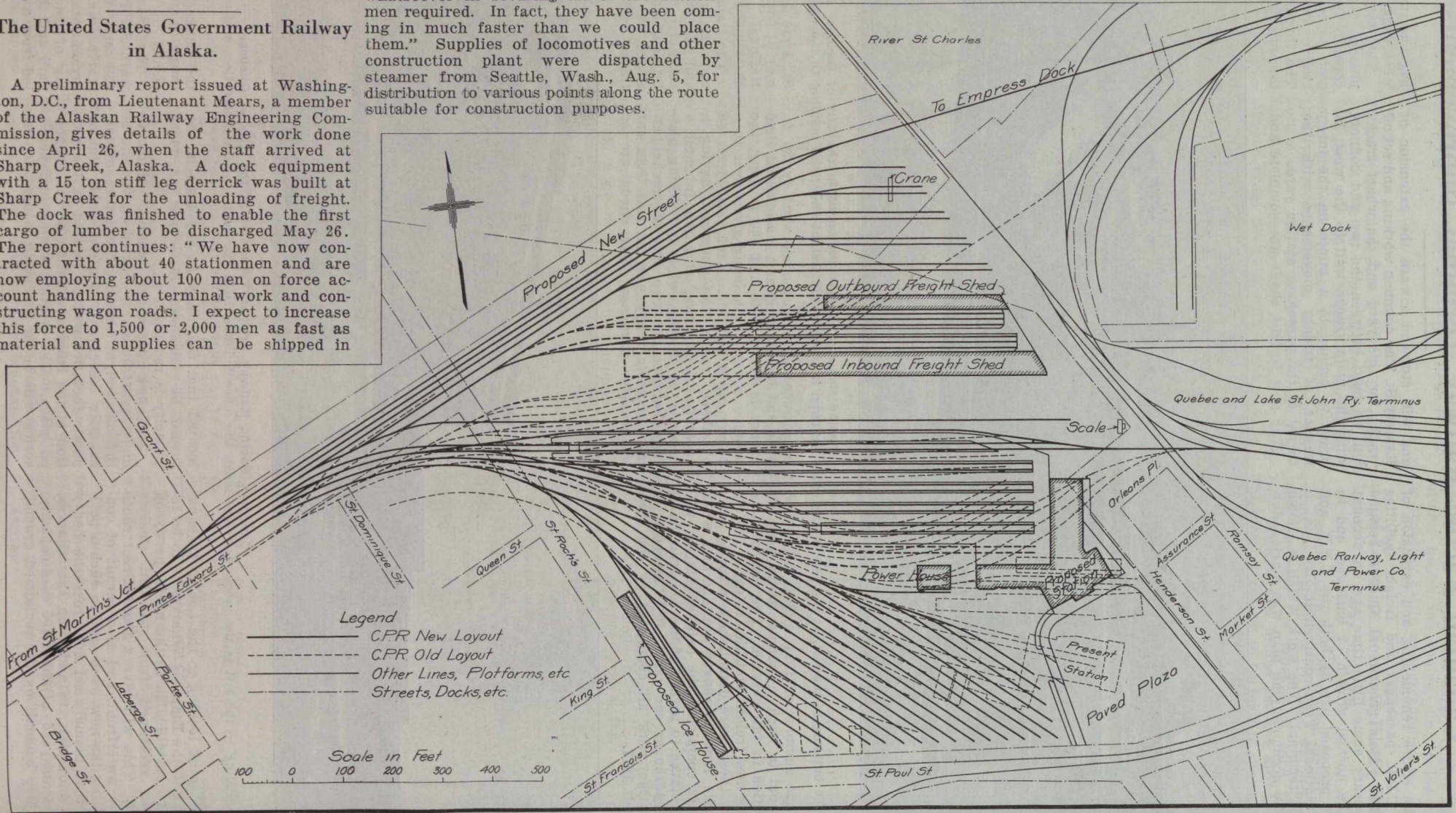
A preliminary report issued at Washington, D.C., from Lieutenant Mears, a member of the Alaskan Railway Engineering Commission, gives details of the work done since April 26, when the staff arrived at Sharp Creek, Alaska. A dock equipment with a 15 ton stiff leg derrick was built at Sharp Creek for the unloading of freight. The dock was finished to enable the first cargo of lumber to be discharged May 26. The report continues: "We have now contracted with about 40 stationmen and are now employing about 100 men on force account handling the terminal work and constructing wagon roads. I expect to increase this force to 1,500 or 2,000 men as fast as material and supplies can be shipped in

here to accommodate that number. By utilizing water transportation along the east side of Knik Arm we are able to attack the line at various points. We already have an active construction camp at Eagle River, 12 miles up the coast, and another has been started at Peters Creek, about 10 miles further north. We expect to continue this system of establishing camps along the tidewater, close to the line, as fast as the final location is completed and the necessary construction arrangements made. All our work is being done by stationmen on a unit basis. Numerous gangs of stationmen have moved into Ship Creek seeking work on the railroad. We have had no difficulty whatsoever in securing all of the stationmen required. In fact, they have been coming in much faster than we could place them." Supplies of locomotives and other construction plant were dispatched by steamer from Seattle, Wash., Aug. 5, for distribution to various points along the route suitable for construction purposes.

Railway Development in Nigeria, has, according to a recent consular report, been as rapid in the last few years as in any part of West Africa. The railway system, which is controlled by the British Colonial Government, extends nearly 800 miles into the interior. The ocean terminus is at Lagos, the main seaport of the colony. The main line runs northeasterly 712 miles to Kano, one of the principal towns in Northern Nigeria. From Minna Jct. is a branch south to Baro at the head of the permanently navigable section of the River Niger, while a second branch runs from Zavia to Bukeru, reaching rich tin deposits. The entire system is of 3½ ft. gauge.

Additional Land Irrigation by C.P.R.—The C.P.R. Natural Resources Department is carrying out a resurvey of its irrigation district west of Taber, Alta., with the view of obtaining more accurate details of the land suitable for irrigation. An official of the department is reported to have stated recently that as soon as the survey is completed a right of way for the main canal will be purchased, and the work proceeded with, and it is anticipated, completed next summer.

The Great North Western Telegraph Co. has opened offices at Ford City, Chaffey's Locks and Grimsby Beach, Ont., and has closed its office at Perth Road, Ont.



Canadian Pacific Railway Passenger and Freight Terminals in the City of Quebec.

# Fuel Consumption on Locomotives.

By T. C. Hudson, Division Master Mechanic, Canadian Northern Railway, Joliette, Que.

The following paper was read at a C.N.R. staff meeting in Quebec recently:

The year 1914 will be recorded in history as one of the most disastrous in recent times. We in this country, although far from the actual seat of war, have felt the effects. The demand for inland transportation the year round has brought into existence three great transcontinental railways, each of which is practising the strictest economy in maintenance, and operation consistent with efficiency.

Coal consumption, being one of the largest operating items of expense, has engaged the attention of railway officials in the past, and is still a warm subject of discussion. It is not my intention to deal with the question of mining, inspecting, transportation, or storage of coal, save to remark in passing it is obvious that a railway purchasing a large quantity of any material should have it given proper inspection by a man familiar with the product. The officer in charge of fuel, in order to get the best results, should co-operate with the operating officials, the mechanical department in particular, as this department consumes about 90% of all coal brought on the line. Where large storage plants are located, the engineering department can assist in reducing the cost of coal by providing the most economical plant to handle it from dump to tender. On a young and growing road this is sometimes difficult, as first cost must be considered and terminal defined, but this is bound to receive attention as maturity is reached.

When criticizing men and methods, we are all prone to forget that the whole world is a compromise. If we take as an instance the supreme law making body of the country we find it to consist of a parliament of men elected by the people, some of whom develop exceptional ability, some average, others are below average, yet all members other than cabinet ministers receive the same salary for service given. It is somewhat the same in railway operation. When we wish to ascertain the efficiency of the men who handle the coal and the locomotives we should compromise between the good and the poor, and find the average. Progress will be marked in so much as we are able to improve this average. This brings us to the question of what can be done to reach this end. Best results are obtained, when all operating officers, from the general manager down, take interest in this matter, and co-operate with the superintendent of motive power, or master mechanic responsible for the supervision and maintenance of locomotive equipment.

The instruction of locomotive men in the proper methods of firing and handling the locomotive is of great importance. The master mechanic should see that the money allowed for supervising and instructing the men is used to the best advantage. He should become thoroughly imbued with the spirit which animated that grand old pagan Seneca, when he remarked, "He that cannot live happily anywhere, will live happily nowhere." Thus fortified he may do effective missionary work. He should keep in personal touch with the men as far as possible, and it will be found beneficial to meet them in a body from time to time to discuss road service matters of economy, and while handing out suggestions he should keep a receptive mind for those offered which may be of practical use. This will create a keener interest and a better understanding toward fuel economy, for after all the men have no way of ascertain-

ing the aim and policy of the company in this matter, excepting through its officials.

Some years ago we got out a series of questions and answers on what we considered good practice. These were used by the road foremen when preparing firemen to pass as locomotive men. Changes and improvements have necessitated the adoption of a more complete treatment on this subject, therefore we have had printed and issued to the men a 1st, 2nd and 3rd series of questions and answers. These are not the opinion of any one man, but are what is considered the best combined thoughts of practical men throughout the continent on this subject.

About a year ago I instituted a system of receiving practical suggestions, tending toward any matter of economy, from the various leaders under my supervision. We are now carrying this further by inviting the rank and file to hand in any suggestions which may create a saving, our object being to make the men feel they are a part of the organization. The master mechanic should select road foremen or travelling locomotive engineers who have ability for the work and energy to apply it. The men selected should be allotted to territory which will permit them to ride on each locomotive at least once a month. They should work in close touch with trainmaster and dispatcher, and assist them in obtaining good road service. I think this is best obtained by allowing each road foreman to devote his time to the men and locomotives on his district, so he may see that the locomotive men and firemen understand their duties, and are following the instructions given them in regard to the proper method of handling and firing locomotives. He should fill out and forward promptly to the master mechanic's office the form furnished, entering on it any defects observed which would prevent the locomotive giving good road service. He should assist the superintendent in cases of discipline, and report to the master mechanic work performed.

Experience has taught me that it is rare that a traffic blockade occurs where the trainmaster, road foreman, and locomotive foreman work in harmony: this unity of purpose assists in keeping down fuel costs. It is the practice to issue a monthly performance sheet showing miles run to one ton of coal, and ton miles per ton of coal. To be of benefit care should be taken to have these as correct as possible, only coal used in service being noted against the mileage and performance of the locomotive; a separate rendering should be shown of coal consumed by the locomotive where no heated shop is provided, and where it must of necessity be kept under steam, and at times maintain heat in coaches, also where soft coal is used to heat shop plants, stations, conductors' vans, steam shovels, pile drivers, or for any other purpose. Where scales for weighing coal are not available, we have found by using the shovel as a unit we are able to ascertain the consumption on the trip very closely, no. 4 shovel carrying about 15 lbs., no. 2 shovel, used on smaller locomotives, slightly over 13 lbs.

The quantity of fuel consumed varies with different conditions on trains, grades, speed, and locomotives. Exact comparisons are impossible unless we know all the conditions, which is not often the case. However, we can compare men and locomotives on similar trains where the schedule is the same, and where an equal tonnage in passenger or freight cars is handled. We re-

ceive a statement each week showing any locomotive failures. It might be beneficial to show unavoidable detentions on the road, which are attributed to the locomotive, and for which, in order to make up and take the train into the terminal on time, the locomotive must burn more coal.

A record on the ton per mile per hour basis would in such cases give credit to the men and the machine. There died six years ago a man who fired the Rocket for George Stephenson. We can mark the great progress which was, during his lifetime, made by the mechanical men in developing the locomotive for the various classes of work, until today it is one of the most effective machines in existence, requiring great care and the prompt reporting and handling of repairs. With the installation of the pneumatic bell ringer and pneumatic fire door, the fireman is now permitted to give more attention to the actual feeding of coal to the firebox.

The successful development of the superheater and application of the brick arch have greatly reduced coal consumption. In order to get most benefit from high degrees of superheater steam, it is necessary to have all tubes bored and clean, and foremen and engineers should be on the alert to note any leaks in superheater units. Cylinder packing, piston rings, and piston valve rings should be kept in good condition. We favor the proper maintenance of the brick arch. The storekeeper by having a stock on hand is assisting to keep down fuel costs. Foremen assist in fuel saving by keeping an eye on the ashpit to see that coal is not wasted when fires are knocked, and by having instructions carried out regarding the overloading of tenders, as coal is expensive ballast. Roadmasters and bridge and building masters are saving coal by instructing their men in proper use of flags, so as to avoid unnecessary delay, as it costs about 300 lbs. of coal to stop and start one of our passenger trains when running about 50 miles an hour, and freight trains in proportion. The speeding of freight trains should be avoided, except in very special cases.

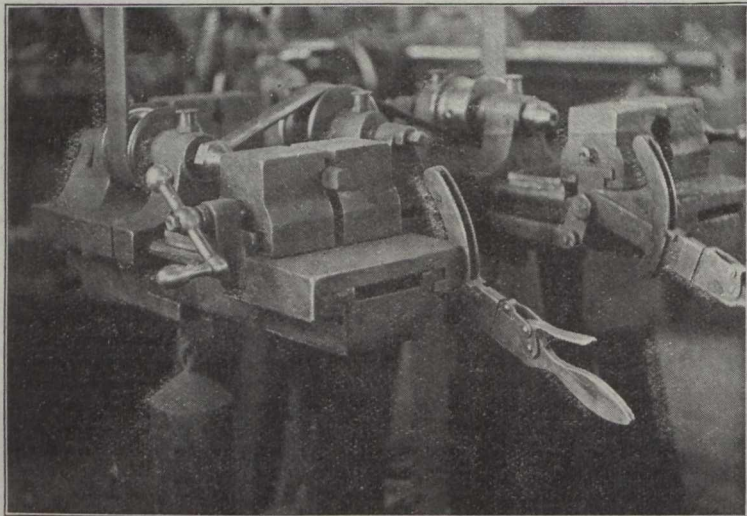
The superintendent who is keeping his freight movements under an average of 13 miles an hour, with a maximum of 25 miles per hour, and who has a dispatcher endeavoring to get trains over the road by avoiding station detentions as much as possible, and by loading to a maximum economical limit, and no more, is going a long way toward fuel economy. Watchmen, by preventing pilfering, and who educate the public that the company's coal is not common property, will save considerable fuel. The car department, in giving inspection to cars, materially assists in lowering fuel costs. Trainmen save coal by keeping locomotive men posted regarding work to be done along the road, thereby permitting the fire to be regulated accordingly. The agent who gauges closely the time at which trains will be ready to leave the yard, and orders locomotives to correspond, is preventing fuel waste. The call boy, by calling crews promptly, thus avoiding terminal delay, is adding his quota. With hearty co-operation and keeping everlastingly at it good averages will be obtained.

The Canadian Pacific Ry. has introduced on its dining cars a buffet, on which cold meats, salads, etc., are displayed under glass covers, giving passengers an opportunity to make a selection, the serving being done by an attendant in white uniform.

# Railway Mechanical Methods and Devices.

## Twin Tell-Tale Hole Drilling Machine at Pere Marquette Railroad Shops.

The P.M.R. shops at St. Thomas, Ont., have in use a tell-tale hole drilling machine for drilling tell-tale holes in staybolts, which is illustrated herewith. It is of the twin type, each machine alike in



Twin Tell-tale Hole Drilling Machine.

## Wheel Lathe Features in Grand Trunk Railway Shops.

On the passenger car wheel lathes in the G. T. R. shops at Stratford, Ont., there are several interesting departures in the equipment for expediting the work, four of which are shown in the accompanying illustra-

tion at d. The wheels to be turned are brought in on the entry track, raised by the jack a, moved forward on the latter until in a position to be lowered on the elevated rails c, rolled into the lathe chuck, the inner ends of the elevated rails raised, when the journals can be chucked, and the machine set up as usual.

The tools are chucked in an air chuck

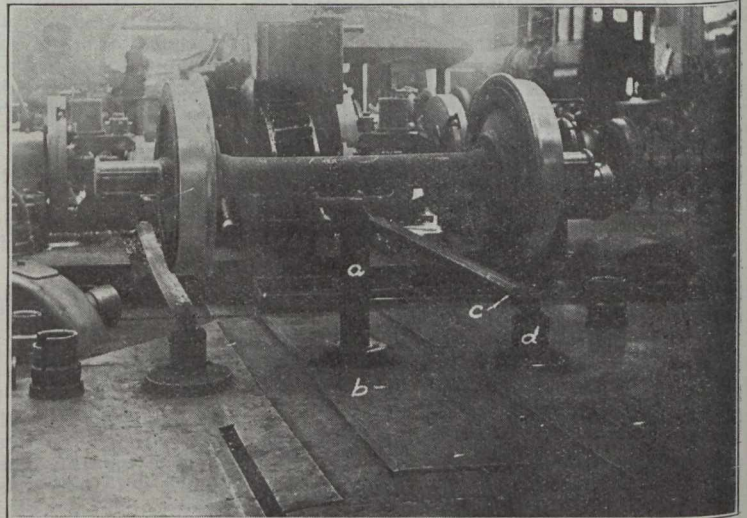


Fig. 1.—Mounting Wheels in Passenger Car Wheel Lathe.

all particulars. The two parts are mounted on a cast iron frame, and both are driven from a common belt, running over a spindle pulley and intermediate idler wheel. The head is similar in construction to that of a light lathe. On the near end are carriages, each equipped with a double vise jaw, operated by a cross screw and handle. A weight suspended from the under side feeds the carriages forward automatically, and

tions. For mounting the wheels in the lathe for turning, the arrangement shown in fig. 1 is employed on one of the lathes. The whole floor in front of the lathe is laid with steel plating, with rails leading up to within about 8 ft. of the lathe as shown in the foreground. Between the tracks there is the travelling pit jack a, which moves in a floor channel covered by the plate b, which travels with the jack. The limits of

of somewhat different design from the commercial pattern of air chuck, and which was made in the shops. The chuck consists primarily of an air cylinder a, mounted on a bracket on the rear of the tool carriage as shown in fig. 2. On the front of the tool stand there is a heavy screw and nut b, bearing down on a clamp c. The latter is prevented from dropping when the tool d is not in position, by the coiled spring

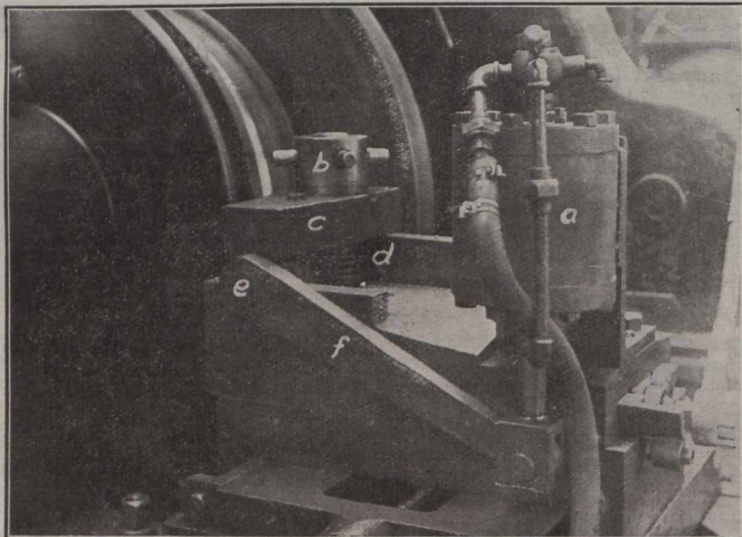


Fig. 2.—Air Clamp for Tools in Passenger Car Wheel Lathe.



Fig. 3.—Tools for Tire Turning in Passenger Car Wheel Lathe.

when the drill has entered to the correct depth, the carriage is run back by hand by means of the handle on the quadrant, and is locked in the back position by a finger on the quadrant, when the staybolt is inserted. It is then released, and the carriage feeds forward, the one operator being kept busy feeding one head while the other is drilling, so that the process is practically continuous.

the jack movement are from a position over top of the far end of the entry tracks, and the near end of the elevated tracks c, which are T iron sections, hinged at the near end on pedestals d, the far ends terminating on the other side of the centre line of the lathe. In the bed of the lathe under the end of these rods there is an air cylinder by means of which the elevated track may be raised or lowered, pivoting about the

around the bolt b under the clamp c. Under the near end of the clamp c there is a short rod e, on the far end of which there is a small cam, bearing up against the under side of the near end of the clamp c, and actuated from the air cylinder through the lever f. The introduction of the cam and rod in conjunction with the air cylinder is a novel departure from the usual air clamp design with the air cylinder directly under

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the end of the clamp, with the latter fulcrumed.

The set of tools used on the passenger car wheel lathe is shown in fig. 3, which, it will be observed, shows the set for both ends of the lathe. The practice in these shops is to use formed tools of high speed steel mounted on soft steel bodies as shown, with the exception of the roughing operation, performed with a plain forged tool. The first operation with the plain forged tool is to rough to approximate shape, with the two tools like a. The flange is then formed with tools b, the tools being fed in until the correct thread diameter is given on the wider portion of the face of the tool. The treads are then formed with the tools x, feeding in the tread diameter set in the previous operation. The final cuts are made with tools d, heeling the tread, finishing in this operation to the M. C. B. wheel gauge, when the wheels are completed. The production averages about a pair of wheels per hour. With the use of the tools shown, a considerable saving in steel results. The soft steel bodies are recessed on the forward end, into which the high speed steel cutters are set by screws. The tools are ground to shape,

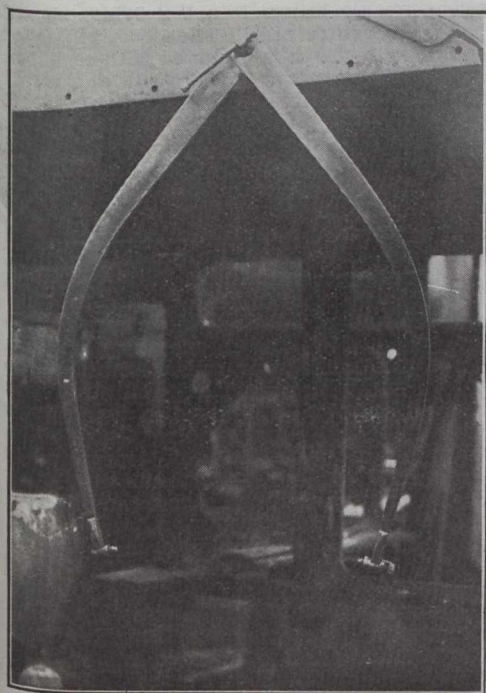


Fig. 4.—Calipers for Passenger Car Wheel Lathe.

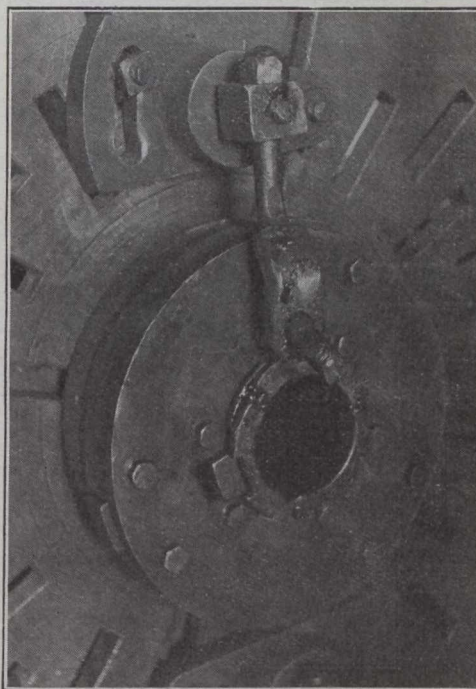
and correctly backed off to shape, so that they may be used a very long time with only a grinding on the upper face from time to time.

It was formerly the practice in these shops to caliper all wheels with the pointer from the cross bar above the lathe. This method is accurate if nothing happens to disturb the position of the crossbar. Trouble was experienced on this score, with discrepancies in the diameters of the pair of wheels, with the result that this method has been abandoned for final measurements, the cross bar only being employed for the roughing stages. The calipers used for the final work are shown in the accompanying fig. 4. They consist of two curved arms of the usual shape, secured together by a screw, the latter with a tightening handle for rapid and accurate adjustment. In the ends of the arms are bearing pins, one of which is stationary, with the other adjustable, consisting of a small knurled headed screw with locking nut, passing through the end of the arm. Through this screw final adjustments may

be secured. The whole arrangement is very rigid, with little chance for errors to creep in.

### Wheel Lathe Driver in Michigan Central Railroad Shops.

The accompanying illustration shows a handy wheel lathe drive as used in the M. C.R. car shops at St. Thomas, Ont. They are used in pairs, diametrically opposite each other on the face plate of the lathe, the driving pin entering the core holes in the outer face of the wheels. Each driver consists of a base casting, bolted to the face plate, and carrying a square headed swivel pin, through the head of which passes a swivel bolt. A pin through the opposite end of the latter passes into the holes in the driving wheel. Such a driving mechanism is handy for wheel work, as so many wheels are placed in and taken out of the lathe in the course of the day that any small saving in time means much in the ultimate economy. From the arrangement of holes in the base casting, the position of the drive may be varied to suit varying sizes of wheels.



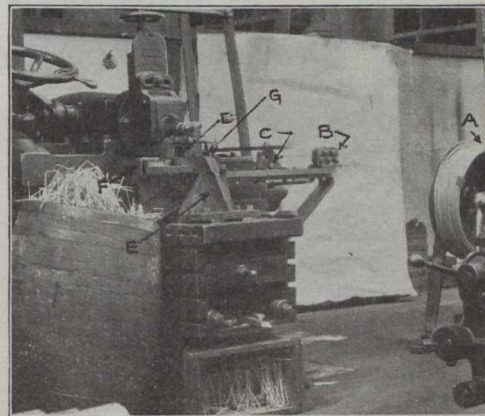
Wheel Lathe Driver.

### Automatic Wire Staple Bending Device in Intercolonial Railway Shops.

The accompanying illustration shows a device designed in the Intercolonial Railway shops, Moncton, N. B., for making wire staples on a shaper. The staples made are about 7 ins. long, 2 ins. wide, and are made of 1/8 in. galvanized wire, and are used as roof board locks on box cars. By the mechanism shown the staples are formed in a very complete manner at the rate of about 500 an hour.

A shows a holder on which is mounted the coil of wire, the latter on unwinding from coil, passing through a straightener B, which is supplied with 5 steel rollers to straighten and remove all kinks from wire. At each stroke of the shaper head the clutch C grips the wire and draws it forward until the end strikes stop F. At the point G a cutter is placed and so arranged that it engages with projecting arm on shaper head, at each forward stroke of shaper head, cutting the wire at the de-

sired point. E shows the staple former die which is bolted to the shaper table. D shows the former, which is held in the tool post holder, at each stroke of the shaper head, this forms a staple over die E. Upon completion of the staple it drops on the incline plane below and is carried into a receptacle. A barrel which has been filled with these staples is shown on the left. We



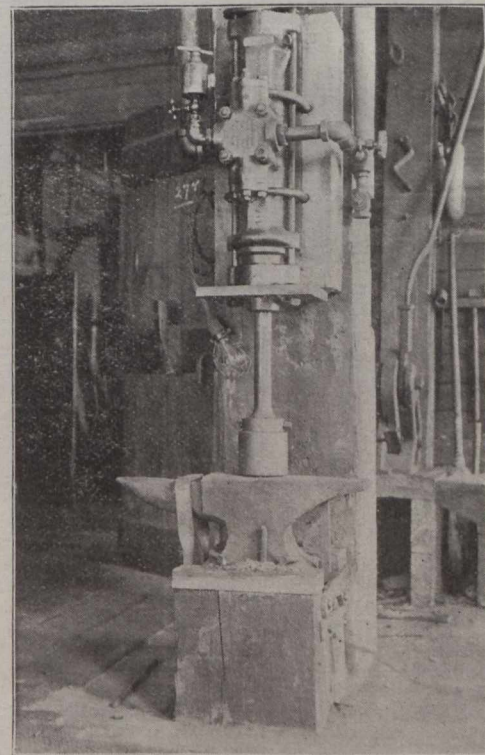
Automatic Wire Staple Bending Device.

are indebted to G. E. McCoy, Assistant to Chief Draughtsman, Canadian Government Railways, Moncton, for the foregoing information.

### Air Hammer in a Blacksmith Shop.

By W. S. Bazole, Master Mechanic, Rapid Transit Subway Construction Company, New York.

The accompanying illustration shows an air hammer in use in our blacksmith shop: It consists of an E52 Ingersoll-Rand reciprocating drill, from which the piston has



Air Hammer for Blacksmith Shop Work.

been removed and the chuck turned to a taper to fit the block used as the hammer. The tapered end of the piston is inserted in this block and driven home, using two set screws to fasten it. There is a square plate under the front head, which is not necessary as this hammer was originally used for driving sheet piling. The rotation

pawls are removed from the machine so that the hammer does not revolve. An old anvil is used for the hammer to strike on, which the writer suggests is not a very good scheme, as owing to the speed of the hammer, the anvil requires to be fastened very tight, as there is more or less rocking condition. It would be well to have a heavy square casting placed on a good foundation. As will be observed, the drill

is bolted to a 14 x 14 in. yellow pine stick, concreted 4 ft. in the ground. This hammer will operate either by steam or air, and for small work is very successful. In our shops recently the blacksmith had occasion to make some 1½ in. square rock wedges, turning out one a minute with a long taper. For welding small irons or steel this hammer is ideal, saving the blacksmith's helper many blows.

## Birthdays of Transportation Men in October.

Many happy returns of the day to:—

E. W. Beatty, K.C., Vice President and General Counsel, C.P.R., Montreal, born at Thorold, Ont., Oct. 16, 1877.

L. S. Brown, Superintendent, Truro, Sydney and Oxford District, Intercolonial Ry., New Glasgow, N. S., born at Nelson, N. B., Oct. 19, 1864.

R. A. Burford, cashier, C.P.R. ticket office, New York City, born at Brooklyn, N.Y., Oct. 4, 1878.

G. E. Burns, Freight Claims Agent, Eastern Lines, C.P.R., Montreal, born at St. Thomas, Ont., Oct. 6, 1863.

K. J. Burns, Assistant General Freight Agent, Great Northern Ry., Vancouver, B.C., born at Rochester, Eng., Oct. 11, 1878.

F. F. Busteed, C.E., formerly Engineer in charge of C.P.R. revision and second tracking, west of Calgary, Kamloops, B.C., born at Battery Point, Que., Oct. 10, 1858.

J. M. S. Carroll, District Manager, Canadian Consolidated Rubber Co., Montreal, born at Ballarat, Australia, Oct. 22, 1877.

C. E. Cartwright, M. Can. Soc. C.E., ex-Division Engineer, C.P.R., Vancouver, B.C., born at Toronto, Ont., Oct. 13, 1864.

G. S. Cooke, Superintendent Grand Trunk Pacific Ry., Melville, Sask., born at Montreal, Oct. 27, 1875.

A. F. Dion, Traffic Agent, Quebec Harbor Commission, Quebec, born at L'Islet, Que., Oct. 1, 1871.

L. V. Druce, Commercial Agent G.T.R. and G.T.P.R., Vancouver, B.C., born at London, Eng., Oct. 20, 1873.

C. E. Dewey, Freight Traffic Manager, G.T.R., Montreal, born at Cheshunt, Eng., Oct. 2, 1873.

C. E. Friend, General Auditor, Canadian Northern Ry., Winnipeg, born at Brighton, Eng., Oct. 12, 1871.

W. P. Fitzsimmons, Commissioner of Industries, G.T.R., Montreal, born at Detroit, Mich., Oct. 27, 1868.

G. Hodge, Assistant to General Manager, C.P.R., Montreal, born there Oct. 2, 1874.

J. H. Hughes, Assistant Superintendent, District 4 Eastern Division, C.P.R., Ottawa, Ont., born at Charlottetown, P.E.I., Oct. 7, 1865.

H. Irwin, M. Can. Soc. C.E., Consulting Right of Way and Lease Agent, C.P.R., Montreal, born at Newgrove, County Down, Ireland, Oct. 27, 1847.

J. W. N. Johnstone, General Passenger Agent, Reid Newfoundland Co., St. John's, Nfld., born at Campobello, N.B., Oct. 4, 1878.

W. M. Kirkpatrick, Assistant Freight Traffic Manager, Eastern Lines, C.P.R., Montreal, born at Kingston, Ont., Oct. 8, 1874.

W. B. Lanigan, Assistant Freight Traffic Manager, Western Lines, C.P.R., Winnipeg, born at Three Rivers, Que., Oct. 12, 1861.

J. W. Leonard, General Manager, Toronto Terminals Co., Toronto, born at Epsom, Ont., Oct., 1858.

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

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

W. T. Marlow, Import Freight Agent, C.P.R., Montreal, born at Limerick, Ireland, Oct. 25, 1872.

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

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

J. W. Porter, Chief Engineer, Hudson Bay Railway, Winnipeg, born at Aberdeen, Scotland, Oct. 15, 1877.

D. Pottinger, I.S.O., ex-Assistant Chairman, Government Railways Managing Board, Moncton, N.B., born at Pictou, N.S., Oct. 7, 1843.

H. G. Reid, Master Mechanic, Saskatchewan Division, C.P.R., Moose Jaw, born at Pembroke, Ont., Oct. 27, 1863.

W. S. Rollo, joint agent, G.T.R., and Central Vermont Ry., St. Johns, Que., born at Dundee, Scotland, Oct. 8, 1852.

J. K. Savage, Superintendent, District 1, Saskatchewan Division, C.P.R., Regina, born at Forreston, Ill., Oct. 5, 1876.

Sir Thomas G. Shaughnessy, K.C.V.O., President, C.P.R., Montreal, born at Milwaukee, Wis., Oct. 6, 1853.

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

A. B. Spence, Travelling Auditor, Reid Newfoundland Co., St. John's, Nfld., born at Harbor Grace, Nfld., Oct. 21, 1882.

F. Stamelen, Night Locomotive Foreman, C.P.R., Winnipeg, born at Chatham, Ont., Oct. 16, 1863.

E. Sterling, Superintendent Districts 2 and 3, British Columbia Electric Ry., New Westminster, born at Thornbury, Ont., Oct. 3, 1875.

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

E. N. Todd, Division Freight Agent, Eastern Division, C.P.R., Montreal, born at Huntington, Que., Oct. 17, 1879.

A. W. Wheatley, Manager, Canadian Locomotive Co., Ltd., Kingston, Ont., born at Ashford, Kent, Eng., Oct. 12, 1870.

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

	Acre.
Calgary and Edmonton Ry. ....	3.61
Canadian Pacific Ry. ....	25.14
Canadian Pacific Ry., roadbed and station grounds .....	.39
Qu'Appelle, Long Lake and Saskatchewan Rd. and Steamboat Co. ....	1,438.00
Total .....	1,467.14

**The Canadian Overseas Railway Construction Corps,** when last heard from, were at Longmoor Camp, Huntingdonshire, Eng., where they were said to be engaged in revising the location of some of the railway lines in the vicinity. Lieut. Col. Ramsey and Major Hervey were said to have gone to France and Belgium to look over some of the ground of their future work.

The G.T.R. has built four box cars at its Elsdon shops, Illinois.

## Stock Cars for Edmonton, Dunvegan and British Columbia Railway.

The Edmonton, Dunvegan & British Columbia Ry. has, as stated in Canadian Railway and Marine World for September, ordered ten stock cars from the National Steel Car Co., Hamilton, Ont.

The dimensions are as follows:—

Length over end sill .....	36 ft. 9¾ ins.
Length inside .....	35 ft. 10¼ ins.
Width over side sills .....	9 ft. 0¾ ins.
Width inside .....	8 ft. 4¾ ins.
Height top of sill to bottom of plate .....	7 ft. 10¼ ins.
Wheel base .....	5 ft. 2 ins.

The cars are of the wood frame type, the underframe consisting of 2 centre sills 4½ x 9, four intermediate sills 4 x 9, and two side sills 5 x 9 and which is further stiffened by 6 truss rods 1¼ in. passing under malleable iron struts and over cast iron saddles on bolsters. Truss rods are anchored on outside of deadwoods with nuts bearing on cast iron washers and on end sills on steel plates. The truss rod struts are attached to 4 x 11 oak needle beams, the whole secured to sills by ¾ in. bolts. Between bolsters and needle beam and between needle beams is a 5 x 5 in. sub sill bolted to centre sills. The draft sill is of oak 5½ x 8, which is provided with cast iron draft keys between centre sill and draft sill, and constructed to take tandem draft gear with 6¼ x 8 M.C.B. draft springs.

The side framing consists of two 2½ x 5 bolster posts, four 2½ x 4½ intermediate posts, 4 x 5 door post and eight 2½ x 5 braces. All posts and braces rest in cast iron caps and pockets set in side sill and side plate, the whole bound together by ¾ in. tie rods, passing through side plate and side sill. Side plates are of 3½ x 7 yellow pine extending full length of car in one piece and side door headers are of oak 4 x 5 ins. Side door rails and stiles are of oak 2 in. thick, having ½ in. steel bars set vertically in holes bored in top, bottom and centre rails and passing through the intermediate rails. Between door posts is a 1¼ x 7¾ guard rail resting in a cast iron pocket on each post and secured to one post by safety chain. The cars are provided with hay racks, running from end of car to door and designed to swing up to side of car. Sides of car from the eaves downward are lined to 2 in. below hayracks, the remainder of sides being provided with slats. End framing consists of 6 x 6 corner posts, 4 x 4½ end posts, and 4 x 5 braces, all of yellow pine, ends of posts and braces rest in cast iron caps and pockets. At end of car 5½ in. from floor is a swing door with 2 x 2 ft. opening. Beside each end post is a ¾ in. tie rod passing through end plate and end sill.

Roof consists of 1¼ x 10½ carlines of yellow pine cut to fit slope of roof and connected to side plate by ½ in. strap bolts. Ridge pole is 2 5-16 x 5 and purlines 2 x 3 both continuous full length of car. Between the two layers of 13-16 in. roof boards is laid one thickness of roofing paper. Ridge of roof is covered with a strip of galvanized iron 12 in. wide extending full length of car and fastened to roof with galvanized iron nails. Two ¾ in. tie rods pass through side plate.

The cars are fitted with Westinghouse air brake. Safety appliances are in accordance with Canadian Board of Railway Commissioners and United States Interstate Commerce Commission requirements. Trucks are of the arch bar type, with simplex bolsters and roller side bearings and cast steel centre plate. Journal boxes are of malleable iron, suitable for 4¼ x 8 journals. Brake beams are Damascus I-beam type, manufactured by the builders.



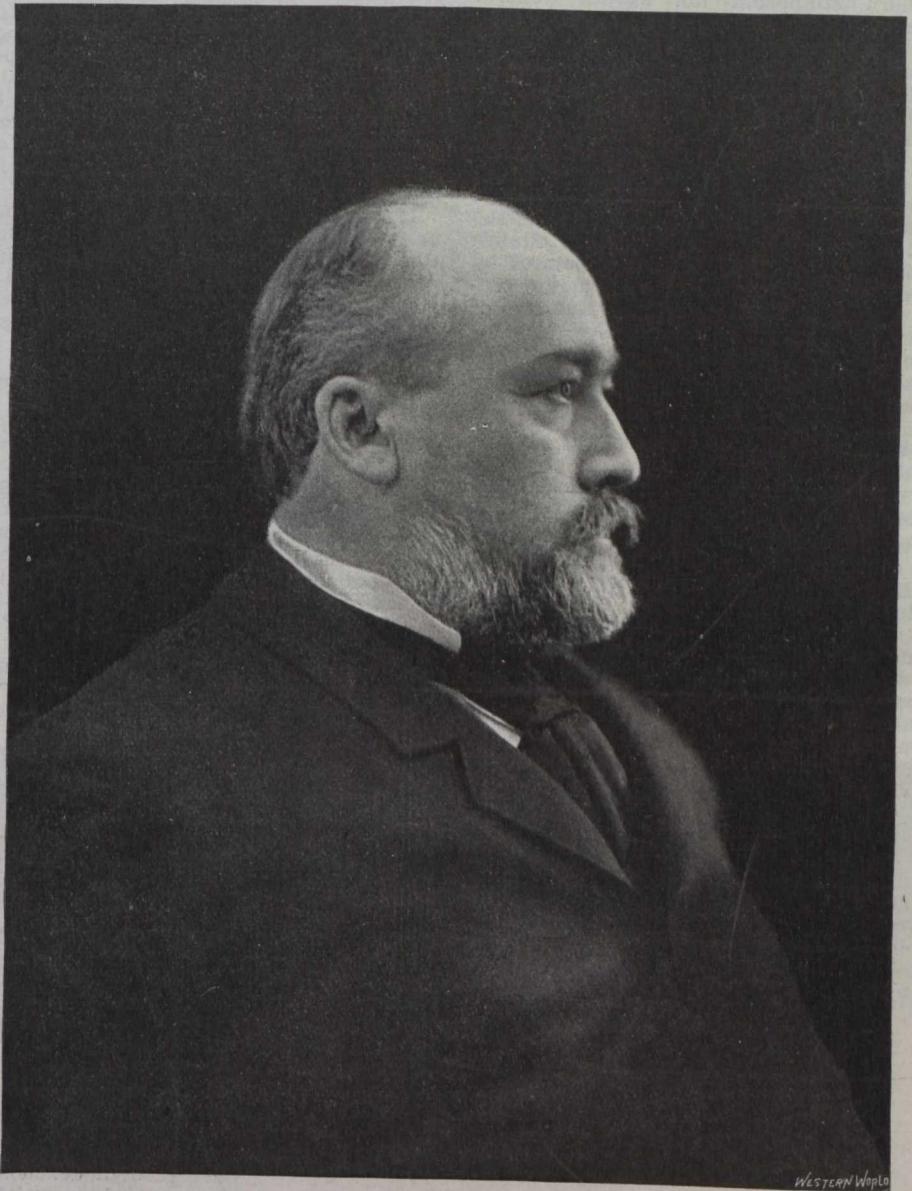
## The Death of Sir William Van Horne.

Following the operation on Sir William Van Horne at the Royal Victoria Hospital, Montreal, on Aug. 23 for an abdominal abscess, which was referred to in the last issue of Canadian Railway and Marine World, very encouraging bulletins were issued, as he appeared to have stood the operation well, and for some days he took ample nourishment and slept satisfactorily, but about a fortnight later a bulletin announced that his condition had changed for the worse, his temperature and pulse having risen considerably, and he gradually sank until he passed away on Sept. 11 at 2.10 p.m., surrounded by his family. To the general public the news of his changed condition came as a surprise, but to his family and to his immediate friends it was probably not unexpected, as owing to his condition of health when he underwent the operation grave apprehension was felt from the first. Until some two years ago Sir William enjoyed wonderfully robust health. A few hours after addressing the Canadian Club in Toronto on Nov. 17, 1913, he was taken ill and was laid up for some little time, but he improved materially and made trips to Cuba, besides spending considerable time at his summer home at St. Andrews, N.B. During the past summer his condition caused his family considerable anxiety, and at last, an operation becoming necessary, he was taken to the hospital hurriedly during the night of Aug. 22-23, and was operated on at 2.30 a.m. As stated above, his condition for some days was considered satisfactory, but diabetic conditions developed that rendered recovery impossible.

His funeral, which took place from his house, 513 Sherbrooke St. West, Montreal, Sept. 14, was a remarkable national tribute, the attendance including representatives of the Governor General, the Dominion and the Quebec Governments, Sir Thos. G. Shaughnessy, President, Geo. Bury, Vice President, a number of other directors and a very large number of C.P.R. officials, representatives of the judiciary, the professions, the transportation, banking, manufacturing and other commercial interests, and thousands of the masses. The funeral service in the great drawing room at 10 a.m. was of a very simple character, the pastor of the Church of the Messiah, of which Sir William was a member, reading passages from the Bible and an extract from Emerson's Threnody, treating of life and character and destiny. From the house to the Windsor St. Station the streets were thronged with people. First went four carriages filled with flowers, then the hearse, followed on foot by the only son, R. B. Van Horne, the little grandson, W. C. C. Van Horne, and Sir William's brother, A. C. Van Horne, of Joliette, Ill. Next came Sir Thomas Shaughnessy with R. B. Angus, followed by Sir Edmund Osler and C. R. Hosmer, George Bury and the other vice presidents and heads of departments, and hundreds of other representative citizens. At the station the body was placed on a special train, which left at 11 a.m., having on board R. B. Van Horne and his wife, A. C. Van Horne, and W. F. Lynch, who was for many years Sir William's private secretary, and is now Purchasing Agent of the Cuba Co. in New York. Lady Van Horne and Miss Van Horne, the only daughter, remained in Montreal. The train, which was run at moderate speed, reached Toronto at 8.35 p.m., where it was met by one of Sir William's oldest Canadian friends, who remained with those on board until it left again, about 9 p.m., and ran direct to Joliette, Ill., which was reached the next

morning at 10 o'clock. There it was met by Col. Fred Bennet, of Joliet, one of Sir William's oldest friends, and by a delegation of representatives of the oldest families of Will County, who had known Sir William as a boy there. He was buried in the family plot beside his father and mother. The C.P.R. general offices in Montreal were closed for two hours on the morning of the funeral service there and flags

Horne was elected mayor of Joliet and was that city's first executive. In 1954 cholera swept through the valley and Mayor Van Horne succumbed to the disease. Following the death of the father the mother located in another section of the little city. William was educated in the Joliet public schools, which he attended until 1857. He read every book obtainable, and drew crude maps of engines and of ships. One day he



Sir William C. Van Horne, K.C.M.G. From a photograph taken in 1897.

were half masted on the company's buildings from London to Hong Kong.

William C. Van Horne was born Feb. 3, 1843, in a little loghouse at a small cross-roads settlement then called Chelsea, in the wooded country between Frankfort and Mokena, in Will County, Illinois, the son Cornelius Covenhoven Van Horne and Mary Minier Richards. The father was a lawyer of some local repute, but failing fortune compelled his son William to enter the service of a farmer at an early age. The boy hoed potatoes and curried horses, but thought of higher things. When the valley of the Desplaines became the great highway into Chicago, the Van Horne family moved to Joliet. In 1852 the elder Van

took up the study of telegraphy and soon was master of the Morse Code.

He entered the Illinois Central Rd. service as a cub telegraph operator in 1857. This was when the road was under General McClellan and Ackerman and other early-day managers. The new operator received \$40 a month, a munificent salary for a boy whose training had been bounded by the rail fences of an Illinois farm. It is said of him in those days: "He learned to fiddle a little and drum a piano, and, having a talent for drawing, he began to cultivate art. He once drew a caricature of General McClellan on the brown painted side of his telegraph station on the Illinois Central, which came near costing him his place. The picture represented General McClellan

in full regimentals, but in a dangerously undignified attitude."

In 1858 he entered the Michigan Central Rd. service. Here he served until 21 years of age, when he was appointed ticket agent and telegraph operator on the Chicago & Alton Rd. He was afterwards despatcher for three years, for one year superintendent of the telegraph and for three years divisional superintendent of the road. Rising in service, his merits became known, and in 1872 he was appointed General Manager of the St. Louis, Kansas City and Northern Rd. From there he went, in 1874, to the Southern Minnesota Rd. as its General Manager. The line was then in the hands of a receiver, but he extricated it from its financial difficulties. His success was rewarded by the presidency of the company. In 1878 he returned to the Chicago & Alton Rd., as General Superintendent, at the same time retaining the presidency of the other line. On Jan. 1, 1880, he was appointed General Superintendent of the Chicago, Milwaukee & St. Paul Rd., at that time the most extensive one in the United States. In the autumn of 1881, he was appointed by the directors of the Canadian Pacific Railway to take control as General Manager of what was then projected and has since become one of the greatest railway organizations in existence, and opened Western Canada to the world, and he entered on his new duties at Winnipeg, Jan. 1, 1882. His big brain, his intense personality, his tremendous energy, and his ready grasp of every railway problem made him even then a conspicuous figure among railway men.

Sir William's fame will rest chiefly upon the construction and organization of the C.P.R. system. He could not have succeeded without the support of Geo. Stephen and Donald A. Smith, afterwards Lord Mount Stephen and Lord Strachcona. Nor could they have succeeded without him. He had the faith that literally moved mountains. It is true that the Dominion Government gave the company millions of money and a vast land subsidy. But the cash was soon exhausted while the west was uninhabited, and the lands unsaleable. The problem of long and desperate years was to find the traffic upon which it could subsist.

The railway to the Pacific Coast was required to give effect to the terms under which British Columbia had entered Confederation in 1871. Ten years from that date was the time allowed for its construction. At the outset, the work was undertaken as a Government enterprise, but a multitude of delays occurred, until five or six years had passed without material progress in the work. Finally, the Government turned to the syndicate headed by George Stephen. By their original contract the syndicate undertook to form a company to build the road from Callander, a town near Lake Nipissing in Ontario, to the Pacific, and afterwards to operate it. The railway system of Eastern Canada had already advanced far up the Ottawa Valley, attracted mainly by the rapidly growing traffic from the pine forests, and it was from a point almost in connection with this system that the new C.P.R. was to be carried to the Pacific Coast, a distance of 2,550 miles. One section of 425 miles between Lake Superior and Winnipeg and another of 213 miles from Burrard Inlet, on the Pacific Coast, eastward to Kamloops Lake in British Columbia, were already under construction by the Government. This left 1920 miles additional to be completed.

On Feb. 15, 1881, the first sod of the new C.P.R. was turned, and before the end of the year 163 miles had been built on the prairie west from Winnipeg. By this time, however, the directors and their financial

agents in Europe had found that there were difficulties in the way of raising the requisite money. Opposition, secret and open, at home and abroad created a distrust of the undertaking, so that the holders of the charter were in the position of having a work on hand in which delay meant heavy loss and possible complications with the Government, while the money necessary to proceed with due speed was not forthcoming. Attention was called by the enemies of the road to the contract made with the Government providing for the completion of the uninterrupted line within ten years. They declared this was impossible as the formidable obstacles found along the north shore of Lake Superior could not be overcome in twice the stipulated length of time, and furthermore, that the north shore section would never be built because, they felt assured, other routes would in the meantime have come into being, rendering the construction around Lake Superior unnecessary.

It was at this juncture that the company secured the services of Mr. Van Horne as General Manager, and to his knowledge, zeal and industry must be ascribed the rapidity with which the work was pushed forward. Within a few weeks of his appointment Mr. Van Horne made his pres-

### Sir William Van Horne

Where shall those feet tread on the unknown way,

That here explored, untiring, our dull sod?

What shall that mind discover and survey

Upon the illimitable fields of God?

Must we not feel that swift from star to star,

From station unto station, that great soul,

An emigrant, shall reach from worlds afar,

Through wide flung portals, Being's perfect goal.

—Barry Dane, in Montreal Gazette.

ence felt. When the enemies of the road began to decry the building of the section north of Lake Superior, he promptly declared for the retention of the original plan, and insisted that an all-Canadian line was absolutely necessary. He plunged into the work with all the strength of his iron nature. His first task was to attack the wilderness on the north of Lake Superior. Twelve thousand railway laborers and from 1,500 to 2,000 teams of horses were set to work, involving the use of a dozen steamboats for the transport of material and provisions. The problem boldly faced by the new General Manager was one calculated to daunt the most venturesome and daring spirit. In his preliminary and personal survey he had found what he afterward characterized as "200 miles of engineering impossibilities." The country it was necessary to cross was a waste of forest, rock and muskeg, out of which almost every mile of road was hewn, blasted or filled up, and in places the filling up of muskegs proved to be a most difficult task. There were moments during the work when even Mr. Van Horne's stout heart almost failed him. Discouraging reports from surveyors and engineers, the discovery of unexpected obstacles, and the varied phases of weather, rain following cold and floods following rain, made the task hard beyond the comprehension of ordinary men.

The Manitoba boom of the early eighties collapsed. There was failure of crops and an attenuated stream of immigration. Prices were low and settlers despondent. Wrong methods of agriculture had been attempted. The settlers from older Canada had no knowledge of prairie farming. There were failures through ignorance, through bad selection of lands, through unwise choice of seed, through unfavorable seasons. The emigration even of Canadians was to the Western States. The immigration from Great Britain was insignificant. In Europe, Canada was unknown, or known only as a British colony of supposedly inhospitable climate and broken by great barren areas. Moreover, the railway's credit was assailed in Europe. Its shares fell to 35%. It was embarrassed by ruthless criticism in Parliament. As originally projected, the railway could not possibly have lived through this period of national stagnation and political attack. Even as it was, the enterprise had to go again and again to the Government for relief.

In the very crisis of its history, when Lord Mount Stephen and Lord Strachcona had pledged their private fortunes to support its credit, Sir John A. Macdonald was only induced by desperate and persistent persuasion to give the aid necessary to avert certain bankruptcy. He was led finally to this decision by the late Hon. Frank Smith, a shrewd and courageous Irish Catholic public man of great wealth and much personal influence, who, seeing clearly the political and national effects which must follow failure of the great enterprise, at length impressed his conviction upon the Government. [Another reference to this crisis will be found further on in this article.—Editor.]

This was the turn of the wheel. Henceforth the road lived upon its own resources, or at least upon the resources of its management. It was the pride of Mr. Van Horne that the pay car never failed to make its regular trip, but at that time there was only a few hours between relief and disaster.

From start to finish, nothing could daunt Van Horne. There was that in the old Dutch stock of the Van Hornes which caused him to hammer away at the problem until he finally succeeded. If he had accomplished nothing else, his victory over the engineering difficulties afforded by the line along Lake Superior's north shore would give him fame enough for one man. While the work of constructing the Lake Superior north coast line was progressing, other portions of the great system were receiving the attention of the tireless General Manager and his assistants. The Rocky Mountains, that formidable barrier of interminable snow peaks, had to be pierced. The obstacles presented along Lake Superior fade into insignificance when compared with those encountered after entering the majestic Rockies and Selkirks. Every conceivable engineering problem was encountered and overcome. Trestles, bridges, cuts, fills and tunnels without number were employed, and to achieve all this money was spent with a liberal hand. It was like campaigning in a hostile country. To rout the forces of nature called for a vast army of men, and this army required a commissary corps as efficient as one accompanying a military body. Pick and shovel, dynamite and blasting powder, formed the weapons of offence; temporary rails and locomotives the transportation; great hordes of laborers the rank and file; intrepid and skilful Canadian and American engineers the staff, and at the head of it all, the General-in-Chief was William Van Horne.

He certainly roughed it in those early

days. It was thrilling when he described his nights on the plains in a pouring rain, sleeping on a wet mattress on the ground, "with the water oozing from the blankets over us, the steam rising like fog from our bodies, and in that way we got many a good steam bath and came off none the worse for the experience."

It is related that sometimes after nightfall the strains of some classic aria would float out over the wild mountain passes. The laborers knew what that meant—that the Big Chief was satisfied with his day's work and was expressing his satisfaction in music on his violin.

Practically every foot of the mountain division of the road was contested and probably every mile of tunnel and track was sealed with the blood of man. The bridging of fathomless chasms and the piercing of many mountains were accomplished only after herculean labor. There are bridges on this mountain division that hang in air—mere spider webs of iron—300 and odd feet above the river they span. There are places where masonry is plastered, so to speak, against the solid rock of mountains. There are ledges midway between heaven and earth, and elevations where the whirling trains plunge headlong into clouds and deep, cool ravines where the roadbed disputes with the darkness the realm of mysterious mountain torrents. There are miles of tunnels and bridges without number. On the mountain division alone the exigencies of the winter season caused the construction company to build 32 miles of snow-shed, and that at the enormous cost of \$64 a lineal foot. Over \$10,000,000 expended as a preliminary precaution against snow.

While the mountain division was carried through, the Government's contractors had finished certain other portions of the road, enabling the C.P.R. to take possession in conformity with the terms of the contract, and to connect the Pacific portion of

the line with that coming from the east. Finally, one rainy day, Nov. 7, 1885,—five and a half years before the time allowed by the terms of the charter,—a party of men associated in the great enterprise assembled in the little settlement of Craigellachie, in the Eagle Pass, B.C., and one of their number, Donald A. Smith,—drove the last spike of the connecting rail, thus establishing a railway from ocean to ocean within Canadian territory. Mr. Van Horne was, of course, one of the party. Before nightfall of that eventful day Queen Victoria sent a telegram to the Governor-General of the day, the Marquis of Lansdowne, congratulating the Canadian people on this national achievement, which Her Majesty regarded as "of great importance to the whole British Empire."

It was the policy of Sir William that enabled the company to survive the hard period of construction and the lean years that followed. Upon its local traffic the line could not exist. Hence he set himself with amazing energy to secure branches in the older provinces, to organize a fleet of steamships on the Lakes and a service on the Pacific. This gave the main line feeders and through business, while the very energy of the management astonished its rivals and greatly impressed the country.

Upon the retirement of the late Duncan McIntyre, of Montreal, as Vice President, Mr. Van Horne took that office, May 14, 1884, and on the retirement of Sir George Stephen, he became President on Aug. 7, 1888.

On May 24, 1894, he was created a Knight Commander of the Most Distinguished Order of St. Michael and St. George, by Queen Victoria, in recognition of his great services to the Dominion and to the Empire in providing the great all-British highway to the Orient by way of Canada.

As President of the C.P.R., Sir William gained a wide acquaintance throughout America. Although for many years en-

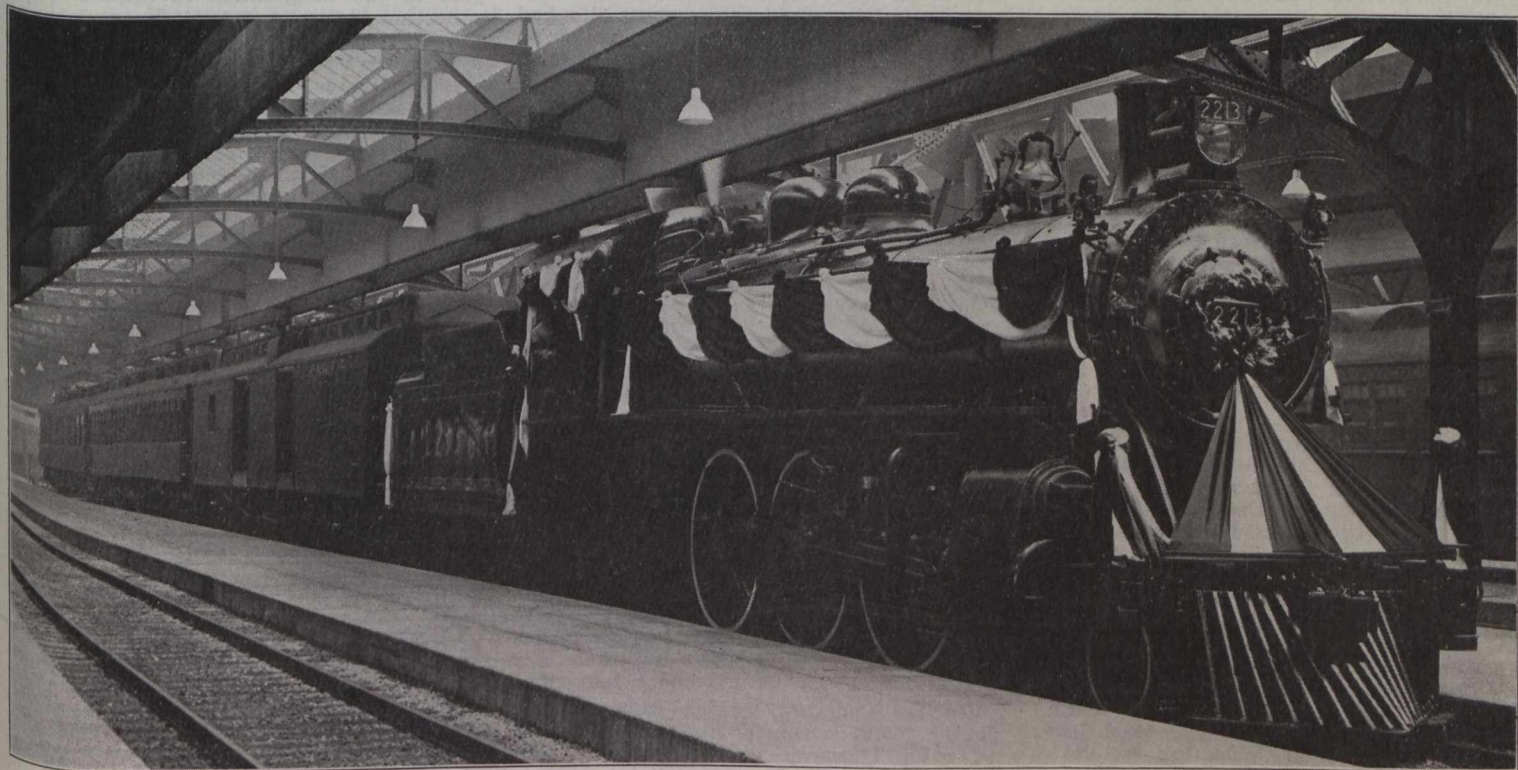
gaged in spirited rivalry with the United States railways, he commanded the respect of his competitors and made warm friends among the most distinguished railway men and financiers of the United States.

On June 12, 1899, Sir William resigned the presidency, and was succeeded by Sir Thomas Shaughnessy. He then became Chairman of the Board of Directors, which office he held until May 9, 1910, when he retired, on the ground that his post was "only a nominal one, not at all useful and hardly ornamental."

"You see," said Sir William then, "I am getting old, and I do not wish even to keep up the appearance of attending to business. I am getting out of everything that may make the least demand on my time or freedom. I shall of course remain on the board of the C.P.R. as long as the shareholders see fit to elect me, for naturally the C.P.R. has a large place in my affections. But in such a concern as the C.P.R. there can be but one active head. Sir Thomas Shaughnessy is that head, and has been for a long time, and I need not tell you what a competent head the company has in him, nor how abundantly able he is to manage its affairs without the aid of anybody. It is my heartfelt wish that he will stick to it for years to come."

Sir William retired with the reputation not only of having accomplished the most difficult feat of railway building ever recorded, but of being the most successful railway man the North American continent had produced and the organizer of the greatest transportation company in the world.

After the close of the Spanish American War, Sir William became interested in railway construction in Cuba in view of the vast possibilities for developing its rich natural resources. In the face of many obstacles and difficulties he and his associates persevered until a splendid system had



Sir William Van Horne's funeral train.

The special Canadian Pacific Ry. train waiting at Windsor St. Station, Montreal, to convey Sir William Van Horne's body to Joliet, Illinois. The car at the rear was the Saskatchewan. Sir William's "home on wheels" for over a quarter of a century. Next to it was a 60 ft. baggage car which was fitted as a mortuary chapel. A number of men under the charge of J. W. Bell, Superintendent of Building, Windsor St. station, were at work day and night from the Saturday to the Tuesday fitting this car with beautiful drapery. Each corner had a large wreath of magnolia leaves 3 ft. in diameter and in the centre of the car was a beautifully designed dais for the coffin. The locomotive was beautifully draped in black and white. Nearly a mile of drapery was used in decorating the train and the front of the C.P.R. station and office building.

been constructed. It was in 1900 that he organized the Cuba Company and became its president. Including the entire main line from Santiago to Santa Clara, and the innumerable feeders, this new railroad system has something over 1,000 miles of track, which only lacks 200 miles of the aggregate mileage of the 17 other railroads on the island. Some of the principal ports reached by the branches are Baracaco, Nipe, Gibara, Santa Cruz del Sur, Sancti Spiritus and Manzanillo. It was the purpose of Sir William and his associates to encourage colonization and to develop the productive sections of Cuba as rapidly as possible. To this end organized efforts were made by agents of the Cuba Co. to induce immigration from Central and South American countries, the natives of which find the Cuban climate congenial. American colonies have been established along the line of the new railway, and American ingenuity and push are rapidly producing beneficial effects in both a commercial and social way. The Van Horne syndicate bought large tracts of agricultural and timber lands which are being converted into ranches, small farms and sites for settlements. All of the capital invested came from Canada and the United States. The Cuba Railway is pronounced by those who are familiar with the conditions of the island—its marvellous productiveness and the great economic value of its products,—to be an achievement big enough to have made the reputation of any ordinarily successful man.

The railway which Sir William built in the Republic of Guatemala, Central America, has been in operation for some years. It extends from the capital of the republic to Port Barrios, on the Atlantic coast, and is about 200 miles long. The Government of Guatemala had heard so much of Sir William's success in Cuba as a railway builder that they opened up communications with him, the result being that valuable concessions were accorded, and the work was started. The President of the republic and other dignitaries were present at the opening, and Sir William Van Horne was hailed as a public benefactor on the

Sir William's fame as the head of the C. P.R. entirely overshadowed his other business activities. For instance, few outside the actual stockholders knew that he was the Dominion's greatest business authority on the pulpwood question, and the head of the largest paper-manufacturing concern in the Dominion—a concern exporting its manufactures to all parts of the world. Few knew, also, that he took a prominent part in the directing of big mining and steel manufacturing enterprises, and that he had scores of minor interests all connected with the development of the natural resources of the Dominion. He was President of the Laurentide Paper Co.; the Canadian Salt Co.; the Canadian Northwest Land Co.; the Cuba Company; the Cuba Ry Co.; Vice-President of the Dominion Steel Corporation; director of the Duluth, South Shore and Atlantic Ry.; of the Dominion Iron and Steel Co.; the Royal Trust Company; the International Banking Corporation; the Minneapolis, St. Paul and Saulte Ste. Marie Ry.; of the Equitable Life Assurance Co.; the Dominion Coal Co.; the Mexican Light and Power Co.; the Winnipeg Electric St. Ry. Co. He had formerly been a director of the Mexican Consolidated Electric Co.; the Havana Electric Co.; the Federal Sugar Co.; the Commercial Cable Co.; the Postal Telegraph and Cable Co.; the Rio de Janeiro Tramway, Light and Power Co.; and Port of Para Dock Co. He was a promoter of the North American Mail Steamships Company in 1900; of the Pacific Coal Co. in 1901; and the Grand Falls Power Co. in 1905.

Sir William, in 1911, threw himself into the memorable political struggle over the famous Taft-Fielding reciprocity agreement. In an open letter, circulated throughout the Dominion, his voice rang out, vigorous, decisive, and epigrammatic. He was even induced to deliver two or three public addresses, not so much in support of Conservative candidates as in opposition to the fiscal policy of the Laurier administration. He boldly denounced reciprocity as a fatal policy for Canada—"a bed to lie in and die in," and his utterances had a tremendous effect everywhere. As he had never been a politician, and what he had to say about reciprocity had no reference to politics, nor to any particular interests, his words were listened to with profound respect by all classes, and undoubtedly their influence was great. No one doubted that Sir William felt strongly when he went upon the platform. That was not where he belonged nor where he showed to most advantage.

Sir William's collection of art treasures, to which he was constantly adding, was a never-failing source of delight to him. He was a collector of old masters, not for the empty glory of associating his name with that of great artists, but because he was himself an artist, and gloried in having beautiful things about him. His home on Sherbrooke St. West, Montreal, so full of art treasures, was to him a "glorious court," and in it he held constant converse with the great dreamers and artists and the master craftsmen of all ages. His taste in art was broad, even universal, and his knowledge of every known school of art, dating from the earliest historic times down to the very latest post-impressionist period, was positively astounding. And what is more, he not only had the knowledge, but he was himself an artist of real genius. This man, who had earned his own living from the age of thirteen, who had educated himself and risen from the position of an office boy to that of the greatest railway builder of his age, whose life had been a titanic struggle with titanic tasks, this man was a painter of pictures which would adorn the walls of any exhibition, as they already do the walls of many homes.

There is one room in Sir William's home that very few visitors were ever allowed to enter. Its walls are entirely covered with paintings of his own execution. There are many canvasses, large and small—lovely examples of "paysage intime"; great, dignified pictures of wood and meadow, executed with a bold, sure handling of mass and color that bespeaks the master; seascapes that breathe forth the majesty and the mystery of the ocean; impressionist studies of sunrise and of night.

"I never had a lesson in painting," said Sir William to a visitor not long ago, "and never would have one. I don't think much of my own artistic efforts, but what I do know I have taught myself. Most of the pictures in this room were painted in from four to six hours. That picture there"—pointing to a fine impression of the steel works at Sydney, C.B., seen over an arm of sea at night—"I painted between bedtime and sunrise. This one"—indicating a huge canvas depicting a scene in the New Brunswick woods—"took me longer than any other. I was eight or ten hours doing it.

One of Canada's leading painters once said: "This continent lost a great artist when Van Horne became a railway builder."

Sir William's greatest delight was to paint. Many of his pictures he gave away to his friends. Down at St. Andrews, N.B., where he had his summer home, there are many houses which contain examples of his work. Whenever anybody went there and built a beautiful summer home, Sir William

regarded it as a sacred obligation on himself to repay their choice of the location by painting a picture for the newcomers, usually painting a decorative picture of a St. Andrew's scene to be let into the wall over the mantel shelf.

Sir William had no set "picture gallery." His whole house is one. The walls in every room are covered with art treasures. Many of the greatest names in the history of art—Spanish, Dutch, French, English and Oriental—are represented on his walls; and what is more, he not only had secured an exceptionally fine example of many of them, but in a surprising number of instances he had possessed himself of the artist's masterpiece. He would tolerate no junk with a great name attached to it. The picture itself had to be great.

Sir William's most valuable picture is a life-size portrait by Velasquez, which is recognized the world over as the greatest picture that artist ever painted. It is difficult to put a price upon this, but judging by the figures which other pictures by Velasquez have brought, this one would command at least \$500,000.

As befitting a man of Dutch extraction, his collection of pictures by great Dutch artists became a particularly fine one. But his taste in art was so universal that he would not admit any national preferences. He would get enthusiastic just as much over a picture painted by some Chinaman far back in the dim beginnings of history as he would over any Dutch picture, and appeared to be as great an admirer of a portrait by Cottet, the post-impressionist, as he was of the work of the great Romney.

Sir William was proud to be the possessor of a portrait by Leonardo da Vinci, the painter of that world-famous picture, the Mona Lisa. He considered it as one of his greatest prizes. It is the portrait of a woman, with something quizzical and elusive about the expression on the face.

Among the pictures that particularly appeal to the imagination in his wonderful collection are two portraits dug up from an Egyptian tomb, and painted in a far-off dynasty B. C. The pictures are the work of some genius. In all the essentials they are as skilfully done as any modern painter could have done them. While mellowed by time, they are wonderfully preserved. The coloring is harmonious, and pose and expression perfectly natural.

Sir William's method of cataloguing was unique. As each object was acquired he made a thumb-nail water-color sketch of it in a "day journal," accompanying the sketch with a description of the object, where it was purchased, who made it and its history. Each thumb-nail watercolor sketch became itself a little masterpiece. Every line, mark and variation of coloring was faithfully depicted, with marvellous detail. Later all this was copied into a general catalogue, but instead of a thumb-nail sketch, a life-size sketch was made, also in water color, brilliantly done. In every particular each drawing was made a faithful copy of the original. There are 42 large volumes of this illustrated catalogue in Sir William's strong room, every drawing in them the work of his own hand, every bit of written description his own writing. For the work of one man this catalogue is nothing short of monumental, a sight of it giving one the impression of the work of a whole life-time. Yet every bit of this work had been done late at night. Sir William never felt that he could afford any of the serious hours of the day for this work of cataloguing. Practically all of it was done after 10 o'clock at night. It was one of his recreations after the hard work of the day. He was a marvellously quick worker, with absolute surety of touch in line and color.

Sir William carried in his head a succinct biography of every artist, a cyclopaedic knowledge of every period and of every school; he had a sympathetic insight into the painter's meaning, his composition, texture and coloring.

Pictures comprised only a part of Sir William's treasures. He had a wonderful collection of the beautiful things which come under the general description of objects d'art. Many of the world's greatest past and present master-craftsmen are represented in this collection and every object in the collection—there are hundreds of them—had been catalogued by Sir William himself.

Many years ago he started out to acquire original models of ancient war vessels, and he got together the most complete collection of them in the world. The models belong to the hey-day of the sailing age, and they are the originals of many of the most famous battleships in the great Dutch, Spanish and British navies of centuries ago. For years he was practically alone as a connoisseur of old-time war vessels, and Europe yielded him her best in this department. To-day these models are almost priceless, and they are eagerly sought after. Very proud was Sir William of his great Armada, for every model in this collection is the original model of an historic battleship.

Sir William's collection as a whole represents a big fortune in itself. Nobody except himself ever knew what it had cost him, and he wouldn't say. But he did on one occasion hazard a guess as to what it is worth. "Perhaps it is worth about \$2,000,000," he said. Considering that one picture alone—the Velasquez—is worth at least \$500,000, his estimate would seem to be an exceedingly conservative one, for his great mansion is filled from floor to roof with artistic treasures.

Sir William was a Governor of McGill University, of the Royal Victoria Hospital and of the Protestant House of Industry, a member of the Committee of Management of the Montreal Homoeopathic Hospital, and Vice-president of the St. John Aumulance Association, a councillor of the Montreal Art Association and a vice president of the National Arts Club of New York.

Sir William held peculiar ideas on the subject of sleep. His doctrine was that sleep is just a habit. Therefore instead of spending one third of his time in bed, like ordinary mortals, he went to bed only when he was thoroughly convinced that it was imperatively necessary in the interests of his health. He thought nothing of staying up nearly all night, and making up the deficiency by snatching a few winks here and there during the day. He had the knack of commanding sleep whenever and wherever he willed it. He could doze off whenever he liked for five minutes, and wake up at the end of that time thoroughly refreshed. He had such an intense interest in life that he felt he could not afford to sleep, except by way of indulging in brief intermezzos. His great business interests—although he had long since "retired" into private life—occupied much of his attention, for the rest, travel, art and study and the companionship of kindred spirits kept every waking moment occupied. Even in his most strenuous years Sir William always found time to devote himself to other pursuits than those of every day work. For instance, he was an excellent violinist and had never allowed his ability to render classical music to become rusty. He enjoyed farming on the model plan, and he was passionately fond of incessant movement and travel.

[The foregoing sketch is not original, but is a compilation of matter gathered from

various sources, particularly from the Montreal Star, which devoted a large amount of space to the subject.—EDITOR.]

Few things show Mr. Van Horne's foresight more forcibly than his decision when he assumed the C.P.R. general managership that the company should control everything connected with its operations, and that there should be no outside concern reaping earnings that should belong to its shareholders. Profiting by his experience on the Chicago, Milwaukee and St. Paul, he absolutely refused to hand over to either of the then two great sleeping car companies in the United States the right to operate over C.P.R. lines, and he had sleeping cars built as rapidly as use could be found for them. The first through train from Montreal to Vancouver had C.P.R. sleeping cars, which were probably ahead of any that had been built up to that date, and no outside sleeping cars have ever been run on the company's lines, except in a few cases where it is absolutely necessary on account of through trains running partly over United States lines. He decided to organize the company's own telegraph service, selecting one of the brightest young telegraphers of that day, Chas. R. Hosmer, under whose vigorous management the lines were built, not only along the company's railways, but through a large outside territory. An advantageous alliance was effected with the Mackay-Bennett telegraph system in the United States and with its Atlantic cable system, and as a result the C.P.R. Telegraphs is to-day one of the two largest on the American continent. Similarly there was developed the great hotel system, stretching from New Brunswick to British Columbia, while the restaurants all along the line and the news business on the trains and vessels are operated directly by the company. Steamships on the Great Lakes were a necessary adjunct of the rail services, and three vessels surpassing anything then on the inland waters were placed on the Georgian Bay, Lake Huron and Lake Superior route. Next the Pacific Ocean was used to secure traffic to and from the Orient. The most beautiful yacht like craft were put in service between British Columbia, Japan and China, and a large volume of through traffic was secured for the transcontinental lines. Later came the Atlantic steamship service and Mr. Van Horne realized one of the most cherished of his desires, the ability to ticket passengers through from Liverpool to Hong Kong over a continuous C.P.R. route. The Dominion Express Company was formed to handle the express traffic, its stock being all held in the C.P.R. treasury, and W. S. Stout was placed at the head of it, a choice which has been abundantly justified by the results.

Of all the men connected with the early history of the C.P.R., Sir William Van Horne stands out, not only as its builder and the creator of its unique organization, but as its prevailing dominant figure in many other matters. Lord Mount Stephen has sometimes been given the principal credit for the carrying through of the great undertaking, and there is no doubt that he was a tower of strength to it, but the writer, who knows something of the inner history of the company in its earlier years, has no hesitation in saying that Van Horne was the man who saved the situation at the most critical period of its history. As mentioned in the preceding sketch of his life, early in 1885 it became imperatively necessary to seek some re-arrangement of the company's finances, which would enable it to procure the capital necessary to make provision for the large volume of traffic which it had developed, as well as for the

great increase which it was felt certain would take place on the opening of the through transcontinental line in the spring of 1896. The Dominion Government was applied to, but Sir John Macdonald and the majority of his colleagues could not be persuaded to agree to the proposals made, although Sir Frank Smith strongly urged them. Mr. Stephen's visit to Ottawa in connection with the matter absolutely failed, and the company was within a day of the due date of a large amount of liabilities. When Van Horne was advised of the situation he rushed to Ottawa by a special train that made a record trip and put the circumstance squarely before the then Minister of Railways and Canals, the Hon. J. H. Pope, who was so impressed by the vigorous presentation of the facts, and of what a continued refusal would result in, that he at once sought Sir John Macdonald, and, aided by Sir Frank Smith, secured the Premier's acceptance of the company's proposals and a guarantee to the company's bankers, which enabled it to tide over its temporary difficulties. Had not Van Horne taken this prompt action and put his whole driving force at work, the company would have had to default in its payments, the bank with which it did business would have been placed in a very serious position, and a national panic would probably have ensued. The arrangement, which is now a matter of history, was approved by Parliament, and the company was placed in a stable position. This is not written with any idea of lessening the credit due Lord Mount Stephen for the great work he performed from the inception of the company until he retired from the presidency in 1888, but to put on record an indisputable fact and to show beyond all question that the C.P.R. owes not only its construction, but its actual uninterrupted existence as a company, to Sir William Van Horne.

One of Sir William's earliest selections for an appointment on the C.P.R. was Thos. G. Shaughnessy, whom he brought from Milwaukee and rapidly promoted as a result of having successfully filled every position occupied. Sir Thomas' continued able administration of the great enterprise, handed on to him by Sir William, is the best evidence of the latter's faculty to read character and to judge of ability.

Sir William was intensely human. Under the sometimes apparently brusque exterior was a sympathetic and most kindly heart. When "Jimmy" French, who was the colored porter on his private car Saskatchewan for many years, died, Sir William attended the funeral and followed the body to the grave.

**C. P. R. Stockholders.** Sir Thomas Shaughnessy is credited with stating recently that C. P. R. common stock is held by 40,468 persons, of whom 5,138 are Canadian holders. Of the \$260,000,000 of common stock, 62.88% is held in Great Britain and Ireland, 13.64% in Canada, 10.39% in the United States, 5.33% in Germany, 5.63% in France and 2.13% in other countries. Since June 1913 the percentage of British holdings has increased by 2.88%, while the holdings in the other countries named have considerably decreased, German holdings dropping from 15% to 5.63%.

**American Association of General Baggage Agents.**—As a result of a correspondence vote, the annual convention, which it was at first intended to hold at Los Angeles, Cal., in September, will be held at Kansas City, Mo., Oct. 13 and 14. J. E. Quick, General Baggage Agent, G. T. R. and G. T. P. R., Toronto, is Secretary.

## Prominent Men's Comments on Sir William Van Horne's Death.

**The Right Hon. Sir Robert Borden,** Premier of Canada: "I have learned with deep regret of the death of Sir William Van Horne, who has been for many years a conspicuous figure in the national life of our Dominion. He was distinguished not only by his remarkable ability and energy, but by the wonderful versatility of his fine intellectual powers. His keen insight into all that concerned the progress and welfare of Canada, and the wonderful opportunities afforded by his career, gave him a great grasp of the difficulties and problems attending the rapid growth and development of our country. Before leaving for England in June I asked him to accept the Chairmanship of a Commission which was then announced, and he had agreed to undertake the task. Shortly afterward, however, his health began to fail, and the constitution of the Commission was postponed until my return, when I learned of his serious illness. I know that it was his keen and intense desire to be of service to Canada in every possible way in the great struggle through which we are now passing, and his declining health alone prevented him from undertaking the service in which his ability and experience would have been of the greatest value."

The Commission above referred to, to which Sir William was to have been appointed as Chairman, was the one announced prior to the Premier's departure, to inquire into and make recommendation upon a large range of problems, including transportation, agricultural production, finance, unemployment, etc. Such a commission had been asked for by the delegation of Mayors which visited the capital early in the summer.

**Sir Thos. G. Shaughnessy,** K. C. V. O., President, C.P.R.—"I first met him in 1880, when he became General Superintendent of the Chicago, Milwaukee, and St. Paul Ry. At that time I was connected with the purchasing department of that line. At the end of 1881 he accepted the appointment of General Manager of the C.P.R., and came to Canada. A fortnight after he asked me to accept the position of General Purchasing Agent for the C.P.R., but there were reasons why I could not accept the offer at that time. A few months later, when he urgently repeated the invitation, I decided to come and take up the post. From that time till the date of his death, Sir William and I have been intimate business and personal associates; and although in recent years his interests have been in one direction and mine in another, there is, I feel sure, no person, apart from the members of his own immediate family, who is more grieved by his death than I am. Probably I knew him more intimately than any one else. His was a great mind, a great heart and a lofty soul."

**Sir Donald Mann,** Vice President, Canadian Northern: Sir William Van Horne was a genius and one of the biggest men of his time. He never realized how great a man he was himself. In my opinion the greatest work he did for the C.P.R. was in the locating of its lines for traffic production purposes, the location of the 'Soo' line being an example of his farsightedness. As an operating man Sir William had few equals on the North American continent, and his knowledge of and experience in operating has been of incalculable value to the C.P.R. Of a most lovable disposition, he was universally liked and esteemed."

**R. B. Angus,** director, C.P.R.: "Sir William was a very dear friend of mine. His loss is a great blow. He was a man of un-

common ability and remarkable foresight, and he was very very highly appreciated by all who knew him."

**Charles R. Hosmer,** director, C.P.R.—"I have been a very intimate friend of Sir William's for 30 years, and have often remarked that there are not half a dozen men on the whole continent who were his equal. We all hold a very deep affection for him, and he was one of the ablest associates we could have had. He was a great business man but a real boy outside of his work, being very enthusiastic in everything he took up and was filled with boyish enthusiasm and eagerness over it all. His loss makes a big gap that it will be hard to fill."

**James J. Hill,** of St. Paul, Minn., formerly President Great Northern Ry.: "Sir William was a dear, close, personal friend of mine. I knew him well back in the seventies. He was a self-made man in every sense of the word. He started his railroad career as a telegraph operator and worked his way rapidly to positions of importance on the Chicago and Alton, Chicago, Milwaukee and St. Paul and other railroads in the United States before he allied himself with the Canadian Pacific. He put his great personality into his work in Canada, and made of the Canadian Pacific one of the greatest railway systems of the world. He was a man of broad ideas, progressive and modern. To-night I can think of no one man whose loss in the development of business and railroad development could be compared with his."

## The Rogers Pass Tunnel Suit.

Canadian Railway and Marine World for September mentioned briefly that the British Columbia Court of Appeal had given a decision in the case of McIlwee & Sons against Foley, Welch & Stewart for practically the full amount claimed. The Vancouver Province gives the following particulars: "By allowing the appeal of J. McIlwee & Sons, tunnel drivers, of Denver, Col., and dismissing the cross appeal of Foley, Welch & Stewart, the Court of Appeal gave a judgment which, if expressed in dollars and cents, may mean anything from \$500,000 to \$800,000. The claim, which was originally for \$527,000, is now to be amended to a claim for \$800,000 before the case comes again before Mr. Justice Clement to assess the amount of damages.

"The suit in which such enormous figures are involved arises out of the contract to run the pioneer and heading tunnels for the great tunnel under Mount Donald, which the C.P.R. is boring at Rogers Pass in the Selkirks. The tunnel, which is approximately five miles long, is to be finished a year hence. Under modern systems for tunnel boring, a pioneer bore about 10 ft. in diameter is first driven at a distance from the main tunnel of some 50 ft. This enables the main tunnel to be attacked from half a dozen different points, and proves a great economy in time for construction.

"The contract for the entire tunnel was let to Foley, Welch & Stewart, who in turn sublet the contract for boring the pioneer and heading tunnels to McIlwee & Sons. In addition to the ordinary contract for the bore, a bonus of \$1,000 a foot for every foot bored in excess of a stipulated amount per month was offered as a special inducement for record speed by the McIlwee firm. The figure meant that the McIlwees would have to break the American record for rapid tunnel work to touch the \$1,000 a foot bonus.

A limit of \$250,000 was placed on the amount of the bonus.

"In September, 1914, after the McIlwees had been at work on their contract for four months, and had proceeded with such rapidity that they claimed that they had earned \$215,000 bonus in addition to the profits of their contract, troubles arose between them and Foley, Welch & Stewart. The engineers for Foley, Welch & Stewart complained that the McIlwees were using too much compressed air for their machines and fans and hindering the other workmen. After trouble and counter charges by the McIlwees that the chief contractors were purposely holding back the work, the McIlwees were ordered to stop work on the ground of disobedience of instructions given by the chief contractors' engineers. Later, after some six weeks of negotiations, Foley, Welch & Stewart offered to allow McIlwees to resume work.

"Instead of resuming work the McIlwees entered suit against Foley, Welch & Stewart for the full amount of the bonus and profits on the contract, totalling \$527,000. At the trial, before Mr. Justice Clement and two assessors, experts from all parts of the continent were called, the hearing lasting three weeks. The plaintiffs' counsel contended that the stoppage was unwarranted, and entitled the plaintiffs to full damages for breach of contract. They suggested that the stoppage was deliberate and was intended to prevent the McIlwees from reaping the profits of a fat contract. Defendants' counsel contended that Foley, Welch & Stewart were justified in stopping the McIlwees for disobedience, and that their offer to allow them to resume work was an answer to the claim for damages for breach of contract. They argued from the evidence of geological experts that the plaintiffs were not entitled to any of the \$215,000 bonus they claimed to have earned, as the rapid boring had been done in soft rock, and that later on in the heart of the mountain extremely hard rock would be encountered, which would reduce the monthly average speed and mean that no bonus at all would be earned.

"In his judgment at the trial, Mr. Justice Clement said he found that McIlwees should have returned to work on Nov. 9, when invited to do so, and their failure to return to work prevented them from obtaining damages for breach of contract. He disallowed the claim for bonus, and gave judgment for \$32,000, which comprised damages at the rate of \$600 a day unearned profits for the period from the time of stoppage of work until Nov. 9.

"The case was argued at great length before the last sitting of the Court of Appeal, both sides having entered appeals. The result of the appeal is that the judges, with Mr. Justice Gallihier dissenting, have allowed McIlwees appeal in full with costs, and dismissed the cross appeal of Foley, Welch & Stewart. Chief Justice Macdonald and Mr. Justice Irving, in their written judgments, say they find that McIlwees are entitled to the full amount of the bonus claimed, and also to all the damages for loss of profits they can show on a reference to the trial judge. At the trial Mr. Justice Clement found these damages to be at the rate of \$600 a day. The costs of the trial are said to amount to about \$8,000, and of the appeal to about \$5,000.

As stated in our last issue, Foley, Welch & Stewart will probably carry the case to the Supreme Court of Canada.

The Canadian American Railway Construction Co. has been granted a license under part 4 of the Manitoba Companies Act, and J. M. Wiley, Winnipeg, has been appointed attorney and agent for Manitoba.

## A Personal Tribute to Sir William Van Horne.

To me Sir William Van Horne's death is a severe blow and irreparable loss; the termination of an intimate friendship of over thirty years which I shall always look back to as one of the greatest privileges of my life.

When, in the autumn of 1881, Mr. Van Horne first visited Winnipeg with Mr. J. J. Hill, who, at the request of the other members of the Canadian Pacific Railway "Syndicate" (as its original directors were designated) to secure the best available man for the stupendous task of building Canada's first transcontinental railway and

at length. In many a conversation he told me of difficulties that were being encountered and of plans for the future that necessarily could not be made public, and I think I can say without egotism that in matters of this nature I enjoyed his confidence to at least as great an extent as any other person not on the company's directorate or in its service, a confidence the respect of which he often spoke of in after years. Looking back over the years that have passed I realize how great was his foresight, how far he planned ahead and how very rarely his judgment was astray.

roundings of his own home, and for other unvarying kindnesses extending considerably over a quarter of a century.

The last rail on the C. P. R. main transcontinental line was laid at Craigellachie, B. C., Nov. 7, 1885, after what was described in the directors' report for that year as "Fifty three months of arduous labor, some anxiety and much unfair and undeserved hostility." By a strange coincidence on May 25, 1894, I was at Craigellachie, the scene of Mr. Van Horne's triumphal completion of his great life work, being detained there for some three days by a series of mud slides

917 SHERBROOKE STREET

Montreal  
9<sup>th</sup> June 1894

Dear Brewster -

Very few,  
I assure you, of all  
the congratulations I  
have received have  
given me as much  
real pleasure as you  
for, among other reasons  
you were the very  
first acquaintance I  
made in Canada. I  
had not then met Sir  
Donald Smith and Angus  
was at the time a  
resident of St Paul.  
When I reached Winnipeg

for the first time early  
in October 1881 you  
were the very first  
man I met on the  
station platform and  
then commenced an  
acquaintance - a friendship  
which has never ceased  
for a minute to be a  
pleasure to me.

I thank you with  
all my heart, dear Brewster  
for all your kind expressions  
and good wishes and  
I hope soon to have  
an opportunity to repeat  
my thanks in person  
Sincerely yours  
W Van Horne  
Acting Brewster }  
Winnipeg

organizing its staff, had selected him, I was, among other duties, editing the Manitoba Free Press' railway department, and went to the C. P. R. station to interview him. Vividly do I remember the lasting impression I then formed of him, his commanding presence, his rugged health, his evident determination, his epigrammatic answers, his abundant humor and kindliness.

He assumed his duties at Winnipeg on New Year's Day 1882, and it was part of my work to call almost daily at his office, to which I soon had a clear right of way. Busy as he was, generally working there far into the night, he was invariably courteous and willing to give information as to the company's operations, which he often explained

Mr. Van Horne removed his office from Winnipeg to Montreal late in 1882, but during the construction period he visited Winnipeg very frequently, and after that less often, on most of which occasions I had the privilege of meeting him there, as well as, particularly during later years, in Montreal, and in addition we corresponded frequently. I have an intense feeling of gratitude to him for many personal kindnesses, of great thoughtfulness shown me in some of the happiest and some of the saddest periods of my life, for most valuable advice on many occasions, for much hospitality, including most enjoyable trips over portions of the lines on which I had the privilege of accompanying him, and in the charming sur-

roundings of his own home, and for other unvarying kindnesses extending considerably over a quarter of a century. The last rail on the C. P. R. main transcontinental line was laid at Craigellachie, B. C., Nov. 7, 1885, after what was described in the directors' report for that year as "Fifty three months of arduous labor, some anxiety and much unfair and undeserved hostility." By a strange coincidence on May 25, 1894, I was at Craigellachie, the scene of Mr. Van Horne's triumphal completion of his great life work, being detained there for some three days by a series of mud slides

Few but those who were on the spot in the early eighties have any idea of the col-

ossal task Mr. Van Horne undertook and of the seemingly unsurmountable difficulties which he overcame, compared with which transcontinental railway construction today is a comparatively easy task. West from old Manitoba the route had to be decided on and construction pushed through an unsettled prairie country, a southerly way had to be found through the Rockies and the supposedly impenetrable Selkirk Mountains, all supplies and construction material had to be taken in from the Winnipeg and Pacific Coast termini, the former of which had no eastern Canadian connection, but never did a contractor have to wait, and continental track laying records were established for both a day's and a season's work. North of Lake Superior the construction difficulties and the getting in of supplies were gigantic tasks, but he grappled with them successfully, and, instead of taking the ten years allowed by the contract between the Government and the company, completed in half that time the great railway that will be his enduring monument and an emphatic witness to his indomitable will, his untiring energy, his organizing ability and his absolute thoroughness. Never was a railway more honestly built and never did shareholders get better value than for every dollar that was put into it.

### Starting of Work on Toronto Union Station.

H. G. Kelley, Vice President, Grand Trunk Ry., and President, Toronto Terminals Railway Co., gave the following statement to the press Sept. 26:

"Preliminary arrangements having been concluded for commencing work on the construction of the new union station at Toronto, the contractors have been instructed to proceed with this work. On account of the large expenditures involved at a time when the world's money market, and more especially the source from which Canada has been accustomed to obtain capital, is practically closed for other than war purposes, it appeared for a time that the undertaking would have to be indefinitely postponed. Arrangements were finally completed, however, with the Bank of Montreal for providing the funds necessary to allow the work to go forward, and the construction of the new building will therefore proceed at once.

"In the preliminary studies and final design adopted by the directors and approved by the Board of Railway Commissioners, every comfort and convenience for the travelling public and the City of Toronto has received careful attention. Much time has been devoted to the study and personal in-

Ardley, Auditor; W. C. Chisholm, General Solicitor; J. R. W. Ambrose, Chief Engineer.

The construction work will be under the general direction of Chief Engineer Ambrose, who will be represented by H. K. Ferguson as clerk of works. W. T. Griffiths will be Superintendent for the contractors, P. Lyall & Sons Construction Co.

The new station, which will face Front St., and extend from Bay St. to York St., was fully described and illustrated in Canadian Railway and Marine World for ..

**Canadian Railway Club.**—Wm. Roger, A.M. Can. Soc. C.E., Elevation Draughtsman, Canadian Pacific Ry., read a paper before the club in Montreal, Sept. 14, on hydraulic presses vs. power presses in connection with the manufacture of cartridges and shells.

**The Canadian Northern Ry. was fined \$50** and costs in the Manitoba Provincial Police Court, Winnipeg, recently for failing to report to the factory inspectors two accidents at its shops, as required by the Factory Act. Notice of appeal was given.

**The Grand Trunk Railway Patriotic Association** of Toronto, the inauguration of which was announced in our last issue, has purchased two motor ambulances for use at the front, and will send a third one should it be required.



The new Union Station, Toronto, on which work has been started.

From the day he first set foot on Canadian soil Sir William Van Horne was a never varying believer in the great future of the country, and it is not too much to say that he was one of the very first to really impress on Canadians generally the immense potentialities of the Dominion and especially of the vast territory west of Lake Superior. For the development of its latent resources, altogether outside of the railway sphere, he labored incessantly, and no native born Canadian could have performed more thorough service than he did to the country of his adoption and of which he soon became a naturalized citizen.

He was a man of gigantic intellect, an able administrator, largely self taught, with a marvellous memory for his omnivorous reading on most varied subjects, a recognised authority on geology and art, a most thorough man on any subject he became interested in, a charming companion, an always interesting conversationalist, a loving husband and father, with thorough domestic tastes, and a loyal and unvarying friend. Among the real makers of Canada none will occupy a higher place in its history.

ACTON BURROWS.

**The Canadian Pacific Ry.**, according to a press report, proposes to cut a trail through the Rocky Mountains from Bany to Lake Louise, Alberta, about 60 miles, during 1916.

spection of the latest approved railway terminals on the American continent, and it is hoped and believed that Toronto will have, in the new station, when completed, a railway terminal second to none. The east wing of the building will be owned and occupied by the Dominion Government as a postal station, and, by reason of its location, immediately adjoining the railway tracks, the receiving and despatching of all mail matter can be conducted instantly, thus avoiding delays which occur when mail matter must be carried to and from trains to postal stations located at distant points in the city. The west wing of the building will be occupied as railway offices by the Grand Trunk and Canadian Pacific Railway Companies, who have equal ownership in the terminals, while the central portion of the building will be the general concourse to and from trains, in which will be located the ticket offices and other accommodations for the convenience of the public. The work will be carried through to as early a completion as is practicable with the magnitude of the undertaking."

Work was started on the site Sept. 26, and it is expected to get the excavations made and the foundations built during the ensuing winter. The officers of the Toronto Terminals Co. are: H. G. Kelley, President; Geo. Bury, Vice-President; H. Phillips, Secretary; H. E. Suckling, Treasurer; J. W. Leonard, General Manager; W. H.

**The Great Northern Ry. (U. S. A.)** has obtained authority from the Board of Railway Commissioners to make certain reductions in its train service in British Columbia. Full particulars are given on another page under "Orders by the Board of Railway Commissioners," viz, orders 24161 and 24163.

**The Mount Lehman Lumber, Timber and Trading Co., Vancouver, B.C.,** has been granted permission to build its logging railway under the British Columbia Electric Ry.'s New Westminster-Chilliwack line at mileage 30, with a head room of 12 ft.

**Canadian Northern Ry. Coal Supply.**—In operating the line north of Lake Superior coal will be supplied from Port Arthur for about 300 miles east and from that point east coal will be hauled from Toronto and other coaling stations in the east.

The Dominion Government engineers and the contractors engaged on the construction of the Hudson Bay Railway, are reported to have offered to supply two machine guns and the men to operate same, to be attached to the 45th Battalion of the Brandon Regiment.

S. Hammett, formerly treasurer of Toronto Lodge 108, Brotherhood of Railway Trainmen, Belleville, Ont., was sentenced to a term in Kingston Penitentiary, Sept. 9, for misappropriating \$800 of the lodge's funds.



## Mainly About Railway People Throughout Canada.

Mrs. Smith, wife of J. F. Smith, General Freight Agent, C. P. R., London, Eng., died there Sept. 7.

W. F. Stevenson, General Agent, Freight Department, C. P. R., New York, died there, Aug. 21, aged 60.

J. Walker, formerly Assistant Engineer, Barrie Division, G. T. R., Allandale, Ont., is on active service in Europe.

C. M. Greene, of New Orleans, La., who died at Cobourg, Ont., Sept. 15, aged 75, was a pioneer railway builder in the United States.

J. L. Doupe, Chief Surveyor, Western Lines, C.P.R., Winnipeg, has been elected a member of the American Railway Engineering Association.

Abel Grills, General Roadmaster, G.T.R., St. Thomas, Ont., has been elected Second Vice President, Roadmasters and Maintenance of Way Association, for the current year.

Major C. N. Monsarratt, A.M.Can.Soc. C.E., Chairman, Quebec Bridge Commission, has been appointed officer commanding the 5th Royal Highlanders, succeeding Lieut.-Col. J. G. Ross.

Major W. B. Kingsmill, of Saunders, Torrance & Kingsmill, Toronto, solicitors, Michigan Central Rd., has been promoted to Lieutenant Colonel and to command the 10th Royal Grenadiers.

The Anglers' Inn, a summer resort on the Rideau River near Portland, Que., which was destroyed by fire Sept. 1, is stated to have been owned by I. G. Ogden, Vice President, C. P. R., and was valued at \$12,000.

Gordon Reed, cadet, Royal Military College, Kingston, Ont., and son of Hayter Reed, formerly Manager in Chief, C. P. R. hotels, has received a commission in the Imperial Army and gone to England.

H. Le Jeune, formerly of the C.P.R. Hotel Department, who has lived at the Royal Alexandra Hotel, Winnipeg, for several years, was stricken with paralysis, Sept. 19, while looking over the improvements in the C.P.R. station there.

James Carson, of Carson and Whan, contractors, who held a sub contract on the Edmonton, Dunvegan and British Columbia Ry., was run over by a grader and killed, at Smoky River, Alta., towards the end of August.

Sir Thomas Tait, President, Fredericton & Grand Lake Coal & Railway Co., and Lady and Miss Tait, who spent most of the summer at St. Andrews, N.B., have returned to Montreal and taken a suite at the Ritz-Carlton Hotel.

John Aird, who has been appointed General Manager, Canadian Bank of Commerce, began work with the old Northern Ry. of Canada, and was subsequently secretary to its Managing Director, the late F. W. Cumberland, before entering banking service.

Brigadier-General Nanton, was received in audience by the King recently, and invested with the insignia of a Companion of the Order of the Bath. He is a brother of A. M. Nanton, of Winnipeg, who is one of the C. P. R. directors.

J. H. Plummer, President, Dominion Steel Corporation, and of its subsidiary companies, the Cumberland Railway and Coal Co., and the Sydney and Louisburg Ry., is reported to have been told by his physician that he must take a rest.

W. E. Mullins, who was formerly in G. T. R. service, and who has been for some time with the United Fruit Co., latterly as Gen-

eral Manager, Costa Rica Division, San Jose, has been appointed General Manager in charge of freight traffic, with office at New York.

The will of the late F. S. Hammond, who was a passenger on the s. s. Lusitania, when she was torpedoed by Germans, and who was a son of the late H. C. Hammond, of Toronto, one time President of the Northern Navigation Co., left an estate valued at \$100,333.34 to the widow.

T. S. Moise, General Manager, Central of Georgia Ry., Savannah, Ga., died at Timagami, Ont., towards the end of August, aged 53. His entire railway service from 1880 to the time of his death was with that company, and he passed through all the grades from clerk and agent upward.

Acton Burrows, Managing Director and Editor in Chief, Canadian Railway and Marine World, has been re-elected a mem-



A. A. Tisdale, Superintendent, Regina Division, Grand Trunk Pacific Railway.

ber of the Canadian Press Association's Postal and Parliamentary Committee, and has also been elected Chairman of the Association's Trade and Class Paper Section and a member of the Association's Board of Directors.

W. H. Stennett, Auditor of Expenditures, Chicago and North Western Ry., who died at Oak Park, Ill., recently, was born in Ontario in 1832, and went to the U. S. at the age of 17. He entered railway service in 1867 with the Illinois Central Rd., transferring to Chicago and North Western Ry. service in 1873, and remaining with that company to the time of his death.

William F. Fitch, who died at Marquette, Mich., recently, was born at Circleville, Ohio, June 28, 1839, and entered railway service, Oct. 14, 1851, as clerk in the General Manager's office, Chicago and North Western Ry. He rapidly rose to the higher positions, and in 1866 was appointed General Manager of the Fremont, Elkhorn and

Missouri Valley Rd. and Sioux City and Pacific Rd. In 1888 he was appointed Vice President and General Manager, Duluth, South Shore and Atlantic Ry., and in 1902 he was appointed President, retiring in 1911.

John Andrew Humble, who has been appointed Claims Agent, Canadian Government Railways, Moncton, N.B., was born at Stanley, N.B., Dec. 12, 1856, and during 1912 was material clerk for the Fredericton and Grand Lake Coal and Ry. Co., Fredericton, N.B. In 1913, he was arbitrator for the St. John and Quebec Ry. Co., Fredericton, N.B.

H. A. Robson, Commissioner of Public Utilities for Manitoba, who has acted in that capacity since the inauguration of the Commission in 1912, was reported by Winnipeg papers to have resigned, Sept. 2. We were officially advised, Sept. 22, that the newspaper reports were unwarranted, that there was no change in the personnel of the Commission, and that until official announcement was made (should any change occur) it was not safe to speculate. This official statement, of course, does not necessarily imply that a change is not imminent.

Arsene Babin, who has been appointed Resident Engineer, Maintenance of Way, National Transcontinental Ry., Quebec, Que., was born there, Sept. 8, 1881, and entered N.T.R. service in May, 1904, since when he has been, to June, 1906, topographer, leveller, transit man on preliminary survey and location, La Tuque, Que.; June, 1906, to Nov., 1914, Resident Engineer on Construction, St. Basile and Portneuf, Que. He graduated with the degree of B.A., from the College of Ste. Anne de la Pocatiere, in 1900, and with the degree of B.Sc. from Laval University, Que., in 1904.

Bliss A. Bourgeois, whose appointment as Assistant to the Comptroller and Treasurer, Canadian Government Railways, Moncton, N. B., was announced in our last issue, was born at Moncton, N. B., May 24, 1869, and entered Canadian Government Railways service, Nov. 17, 1887, since when he has been, to June 1890, clerk in General Superintendent's office, Moncton, N. B.; June 1890 to Nov. 1894, secretary to Treasurer, Moncton, N. B.; Nov. 1894 to Mar. 1907, book-keeper, Treasurer's Department, Moncton, N. B.; Mar. 1907 to May 1915, chief clerk, Accounting Department, Moncton, N. B.

Clayton H. Lundgren, who has been appointed General Yardmaster, National Transcontinental Ry., Fort William, Ont., was born at Northfield, Minn., Dec. 22, 1877, and entered railway service in April 1895, since when he has been, to Oct. 1900, in the Mechanical Department, Minneapolis, St. Paul and Sault Ste. Marie Ry., Glenwood, Minn.; Oct. 1900 to Sept. 1909, freight and passenger conductor, same road, Minneapolis, Minn.; 1909 to 1911, in private business at Glenwood, Minn.; 1911 to 1912, in train service, G. T. Pacific Ry., Graham, Ont.; 1912 to 1913, Assistant Yardmaster, Canadian Northern Ry., Port Arthur, Ont.; 1913 to Aug. 1915, Assistant Yardmaster, G. T. Pacific Ry., Mission Yard, Fort William, Ont.

Arthur A. Tisdale, whose appointment as Superintendent, Regina Division, Grand Trunk Pacific Ry., Regina, Sask., was announced in our last issue, and whose portrait appears in this issue, was born at Mount Vernon, Ont., Mar. 8, 1874, and entered railway service Sept. 18, 1889, since when he has been, to July 1892, in local freight office, G. T. R., Hamilton, Ont.; July

1892 to May 1899, secretary to Chief Engineer, G. T. R., Hamilton and Montreal; May 1899 to Oct. 1907, successively, secretary, chief clerk, and Assistant to Fourth Vice President in Charge of Transportation and Maintenance of Way, G. T. R., Montreal; Oct. 1907 to Oct. 1909, Assistant to Vice President and General Manager, G. T. Pacific Ry., Montreal; Oct. 1909 to June 1915, Superintendent Lake Superior Division, G. T. Pacific Ry., Fort William, Ont.

**E. Eley**, who has been appointed Master Car Builder, Eastern Lines, C. P. R., Montreal, was born in London, England in 1867, commenced railway service with the Great Northern Ry., at King's Cross, London in June 1888 and came to Canada in 1889. He entered C. P. R. service in the Bridge and Building Department, Mar. 1894, and was transferred to the Car Department at North Bay, Ont., Aug. 1894, and was, from Mar. 1902 to Jan. 1903, charge hand at Chapleau, Ont.; Jan. 1903 to July 1906, leading hand at North Bay, Ont.; July 1906 to Feb. 1907, Car Foreman, Quebec, Que.; Feb. 1907 to May 1911, Car Foreman, Glen Yard, Montreal; May 1911 to Apr. 1912, General Foreman, passenger car repair shops, West Toronto, Ont.; Apr. 1912 to Sept. 7, 1915, Divisional Car Foreman, Lake Superior Division, North Bay, Ont.

**A. P. Linnell**, Chief Assistant to A. B. Smith, Manager of Telegraphs, Grand Trunk and Grand Trunk Pacific Railways, Montreal, has been granted extended leave of absence, due to his having enlisted in the 3rd. Universities Company (reinforcements Princess Patricia Light Infantry) Canadian Expeditionary Force, and has sailed for England preparatory to going to the front. He was for some years secretary to the Commercial & Traffic Superintendent, Grand Trunk Pacific Telegraph Co., Winnipeg; subsequently, in order to gain additional experience, he transferred to the construction side of the telegraph business as an ordinary groundman, reaching ultimately the position of foreman in charge of one of the telegraph outfits building lines through the Rocky Mountains. In Jan. 1913 he was transferred to Montreal and given the position he has just temporarily vacated. On leaving Montreal recently he was presented with a wrist watch by his staff.

**W. M. Kirkpatrick**, Assistant Freight Traffic Manager, Eastern Lines, C.P.R., Montreal, has been appointed an officer in the 87th Overseas Battalion, Canadian Grenadier Guards, which has its headquarters in Montreal, and will leave shortly for active service. He is a son of the late Sir of the C.P.R., and was born at Kingston, Ont., Oct. 8, 1874. He entered C.P.R. service Mar. 7, 1892, in the Vice President's office, and up to July, 1899, filled various positions in the Chief Engineer's office, Foreign Freight Department, Montreal, and General Freight Agent's office, Toronto; July, 1899, to Dec., 1902, clerk in Fourth Vice President's office, Montreal; Dec., 1902, to Apr., 1905, Assistant General Freight Agent, Pacific Division, Vancouver, B.C.; Apr., 1905, to Feb., 1907, Export Freight Agent, Montreal; Feb. to Dec., 1907, General Freight Agent, Atlantic Division, St. John, N.B.; Dec., 1907, to Apr., 1911, General Freight Agent, Through Traffic, Ontario Division, Toronto; Apr. to Aug. 21, 1911, General Freight Agent, Eastern Lines, Montreal, at which latter date he was appointed Assistant Freight Traffic Manager, Eastern Lines.

**P. J. Flynn**, who has been appointed Superintendent, Districts 2 and 3, Central Division, Canadian Northern Ry., Winnipeg, was born at Fishers, N. Y., Nov. 22, 1872, and entered railway service, Apr. 1, 1888, since

when he has been, to Aug. 1, 1891, yard clerk, Lehigh Valley Rd., Buffalo, N. Y.; Aug. 1, 1891 to Apr. 1, 1892, night yardmaster, same road, Buffalo, N. Y.; Apr. 1, 1892 to Jan. 24, 1894, Yardmaster, Tift Farm, Yards, same road, Buffalo, N. Y.; Jan. 24, 1894 to Nov. 1, 1898, General Yardmaster, same road, Manchester, N. Y.; Nov. 1, 1898 to Apr. 1, 1901, Assistant Trainmaster, Pennsylvania Division, same road; Apr. 1, 1901 to Feb. 1, 1905, General Yardmaster, same road, Sayre, Pa.; Feb. 1, to Aug. 1, 1905, General Yardmaster, New York, New Haven and Hartford Rd., Worcester, Mass.; Aug. 1, 1905 to Feb. 1, 1907, General Yardmaster in charge of Terminals, same road, Providence, R. I.; Feb. 1, 1907 to Oct. 1, 1908, General Yardmaster in charge of Terminals, Lehigh Valley Rd., Buffalo, N. Y.; Oct. 1, 1908 to Jan. 1, 1913, Trainmaster, same road, Buffalo, N. Y.; Jan. 1, 1913 to Aug. 1915, Terminals Manager, Winnipeg Joint Terminals, Canadian Northern Ry., G. T. Pacific Ry. and National Transcontinental Ry., Winnipeg.



The Late F. M. Spaidal.  
General Superintendent, Quebec Grand Division,  
Canadian Northern Railway.

**F. M. Spaidal**, General Superintendent, Quebec Grand Division, Canadian Northern Ry., Montreal, died there, Sept. 2, after a prolonged illness. He was born at Gananoque, Ont., Nov. 13, 1858, and entered railway service in 1876, since when he was, to June 1883, operator, agent and dispatcher, G. T. R. at various points between Montreal and Kingston, Ont.; June 1883 to June 1885, agent and dispatcher, Union Pacific Rd., Butte, Mont., and other points; Aug. to Dec. 1885, operator, C. P. R., Ottawa, Ont.; Dec. 1885 to June 1893, dispatcher, C. P. R., Ottawa, Ont.; June 1893 to Sept. 1897, Chief Dispatcher, C. P. R., Ottawa, Ont.; Sept. 1897 to Oct. 1903, Trainmaster, C. P. R., Ottawa, Ont.; Oct. 1903 to Aug. 1906, Superintendent, District 2, Eastern Division and Montreal Terminals, C. P. R., Montreal; Aug. 1906 to Dec. 1907, Superintendent, Canadian Northern Ontario Ry., Toronto; Dec. 1907 he was appointed General Superintendent, Canadian Northern Quebec Ry., Montreal, and in Mar. 1908, he was also appointed General Superintendent, Quebec and

Lake St. John Ry., and his office moved to Quebec, Que. In 1913 he was appointed General Manager, C. N. Q. R. and Q. & L. St. J. R., and his office moved to Montreal, and in July 1914, on fuller organization of the Canadian Northern Ry., he was appointed General Superintendent, Quebec Grand Division, C. N. R., with office at Montreal. The funeral took place at Brockville, Ont.

**R. E. Larmour**, who has been appointed General Agent, Freight Department, C.P.R., New York, was born at Brantford, Ont., Sept. 26, 1868, and entered railway service Aug., 1884, at Stratford, Ont., as office boy in the office of his father, who was then Division Superintendent, G.T.R., remaining there until 1886; since when his record has been: 1886 to 1888, clerk in the office of General Manager, Great Eastern Fast Freight Line, Detroit, Mich.; 1888 to 1890, Accountant to General Superintendent, Chicago and Grand Trunk Rd., Detroit, Mich.; 1890 to 1892, Local Freight Department, G.T.R., Detroit, Mich.; 1892 to 1898, Transfer Clerk, Through Freight from Wabash Rd. to G.T.R., at Windsor, Ont. He entered C.P.R. service in 1898, and has been, to Nov., 1899, chief clerk Freight Department, Fort William, Ont.; Nov., 1899, to May, 1900, acting agent, Fort William; May, 1900, to Aug., 1900, chief clerk, Superintendent's Office, Fort William; Aug., 1900, to Feb., 1903, agent, Port Arthur, Ont.; Feb., 1903, to Feb., 1905, Freight Claims Agent, Pacific Division, Vancouver, B.C.; Feb., 1905, to Feb., 1906, Freight Claims Agent, Central and Western Divisions, Winnipeg; Feb. to Aug., 1906, City Freight Agent, Winnipeg; Aug., 1906, to June, 1908, Freight Agent, Fort William, Ont.; June to July, 1908, General Agent, Fort William, Ont.; July, 1908, to June, 1909, General Freight Agent, Kootenay and Boundary District, Nelson, B.C.; June, 1909, to Apr., 1911, General Freight Agent, Central Division, Winnipeg; Apr. to June, 1911, Division Freight Agent, Manitoba Division, Winnipeg; June, 1911, to July, 1914, Division Freight Agent, British Columbia Division, Vancouver; July, 1914, to Sept. 30, 1915, Assistant General Freight Agent, Vancouver, B.C.

**Canadian Northern Ry. Through Service.**—The C.N.R. will probably start a freight service on its main line north of Lake Superior and also on the western portion of the line through British Columbia during October, thus giving through service between Toronto and the Pacific coast. The company's present construction terminus in B.C. is at Port Mann, on the north side of the Fraser River, four miles from New Westminster Bridge, but it has bought the Great Northern Ry.'s Port Kells branch over which it will run from Port Kells, 10.7 miles from New Westminster Bridge, to New Westminster and thence over the Great Northern track into Vancouver. It is probable that a through passenger service will be established in November.

**Railway Construction Laborers for the Front.**—A press report from Vancouver, B.C., states that Lt.-Col. A. E. Hodgins, who was formerly a Division Engineer on construction, National Transcontinental Ry., at Kenora, Ont., has been selected by the Government to superintend the recruiting of 1,100 specially selected men from railway construction camps and men who have had experience in railway construction and general mechanical work in the western provinces. It is stated that they will be utilized in Europe for trench work, road building and railway construction.

**The Dominion Bridge Co.** has opened an office in London, England, at 15 Dartmouth St., Westminster, S. W., with J. E. Bell as London Representative.

## Steel Frame Box Cars for the Russian Government.

The Russian Government has placed orders recently for a large number of freight cars to be delivered on short notice. These include 2,000 steel framed, inside sheathed 40 tons capacity box cars for grain and general service, now being delivered by the Eastern Car Company, New Glasgow, N. S. As will be noted from the accompanying illustrations the type of construction embodies a design of outside metal roof with runningboard and handrail attachments to suit European practice. Insulation is obtained by the use of a layer of matched boards, placed longitudinally and secured to furrings which are bolted on top of pressed steel carlines, which in turn are riveted to the side plate Z-bar. The roof sheets are applied in 20 sections per car of no. 24 galvanized steel having standing seams.

A structural steel side framing is employed. The side posts and diagonal braces, with the exception of the inner diagonal brace at bolster, which is formed from a 3-in Z-bar @ 8.4 lb. per ft., are all 3-in. Z-bars @ 6.7 lb. per ft. Side post and brace top connections to 4-in. Z-bar @ 8.2 lb. side plate are made with pressed steel connection plates. The 7 x 3½ x 7-16-in. rolled steel angle iron side sill is so located as to admit of the side posts and braces being riveted directly to same with three rivets at each crossing. The side and end lining is formed from 1¾ x 5¼ in. tongued and grooved boards, secured to each post by eight and to each brace by six button head bolts with nuts placed outside, so as to give a smooth interior. The top flange of the side plate Z-bar forms a sealed joint with the lining and at the bottom, the lining is extended to the lower edge of the flooring. A 2½ x 2 x 3-16-in. corner angle secured to the bottom board of the lining with button head bolts and having the wide flange resting on the top of the floor forms a grain tight joint all around the base of the car. The side doors are 6-ft. 5½-in. wide formed with a frame 2¼-in. thick, having two centre rails reinforced by ½-in. pressed steel brace. The corners of the door are

thick is secured over the flooring at the door opening. The flooring is formed by tongued and grooved boards 1¾-in. thick, bolted to the underframe members.

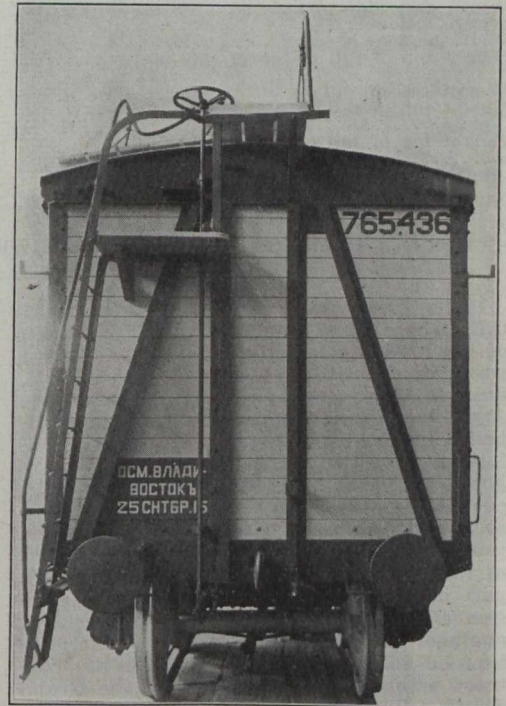
Pressed steel corner posts ¼-in. thick are provided in conjunction with 3-in. Z-bars @ 6.7 lb. for centre end posts and diagonal braces. The usual type of brake mast application, as used for cars operating on this continent, is followed, and a pressed steel platform and brace is included.

Hook type, drop forged couplings are used in conjunction with springs and cast follower cups, the stem of the coupling is extended and threaded, so as to accommodate one hexagon nut and a flat split key placed immediately behind the rear follower. The European type of disc buffer, 17 23-32-in. diameter, is used, same being bolted directly to the end sill.

The design of the underframe presents an unusual procedure, in that truss rods 2-in. in diameter, located 13⅝-in. off centre, are employed in conjunction with an all metal underframe and steel side frame. The centre sills are 10-in. @ 21.8 lb. per foot rolled steel channels, placed 12⅞-in. apart back to back, a full length top cover plate 20-in. by ¾-in. is provided, also a 4 x 3½ x ½-in. x 33¼ ft. rolled steel angle is riveted to the lower portion of the web of each centre sill. Bolsters are formed with 16 x ¾-in. cover plates, the top one only extending from side sill to side sill, the lower one just includes side bearing, all secured to pressed steel diaphragms flanged all around. Cast centre plate fillers between centre sills form a tie between the two bolster diaphragms. Two crossbearers placed 12¼ ft. apart centre to centre, provided with same design of diaphragms as bolster, and top and bottom cover plates 6 x ¾-in., form support for truss rod struts, which are 23¼-in. deep. Floor supports of pressed steel 4¼-in. deep are located as follows: one between bolster and crossbearer and one between crossbearers at centre of car. Longitudinal floor stringers of 3-in. Z-bars @ 6.7 lb. per ft, run full length of car, located 3 ft. 1 in. each side from centre of car. Press-

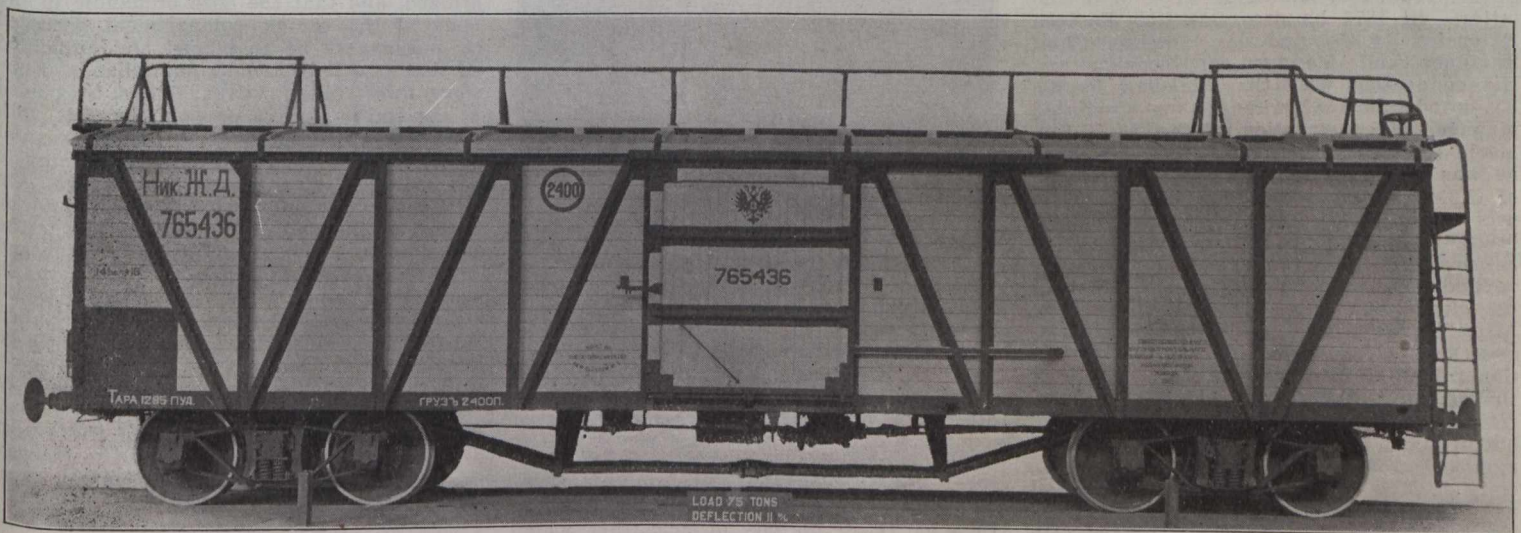
steel piping. All safety appliances are arranged to come within the clearance gauge of the German and Austrian Railways.

An arch-bar type of truck is employed in conjunction with axles having journals for 100,000 lbs. capacity cars, in spite of the fact that the cars are only built for 80,000 lbs. loading. The side frames are formed by top and bottom bars 5 x 1¼-in. steel and



End View of Steel Frame Box Car for Russian Government.

tie bar 5 x ⅝-in. steel. Centre plates are of malleable iron, body section bolted, truck section riveted to truck bolster, latter being formed by two 10-in. I-beams @ 25 lb. per ft. and fitted with 13-in. x ⅜-in. top and bottom cover plates. Roller type side bearings located 2½ ft. off centre and arranged for ⅜-in. clearance, are employed in con-



Steel Frame Box Car for Russian Government.

strengthened by angle plates; the top and bottom combination guide and stiffener strips, which are Z-shaped, are bolted to the door frame and engage three malleable iron bottom guides when the door is closed. Door hangers operate on an enclosed track as shown by the illustration. Grain doors of the removable type are provided and the usual type of steel threshold plate ½-in.

ed steel diagonal braces, transmitting thrust from end sill buffer to centre sill are formed, so as to tie the bottom and centre sill construction together, as well as giving stiffness to the pressed steel end sill, which has a flange 12-in. wide lapping over the centre and side sill construction.

The ladder stiles are formed from angles with round iron treads; hand rails are of

junction with four-cluster type bolster springs located 6 ft. 8 5-32-in. centre to centre. Offset style of brake rigging is arranged to provide a distance of 15-in. from rail to centre of brake head. Column castings are designed with brake hanger lugs cast integral. Clearance between top of bolster and underside of top arch bar is maintained at ⅜-in. centre pins, 2-in.

diameter, and fitted with top and bottom keys with cover provided inside of car to admit of their removal. Spring planks are formed from 13-in. channels @ 32 lb. per ft.

The following are the general dimensions:

Gauge	5 ft.
Length over buffers (free)	46 ft. 10 $\frac{3}{4}$ in.
Length over pulling face of couplers	44 ft. 5 $\frac{1}{2}$ in.
Length over end sills	42 ft. 11 $\frac{1}{2}$ in.
Width over side sills	9 ft. 1 in.
Width over side plates	9 ft. 1 $\frac{1}{2}$ in.
Width inside	8 ft. 10 in.
Width of door opening	6 ft.
Height top of rail to top of side plates	11 ft. 6 $\frac{3}{4}$ in.
Height top of rail to top of floor	4 ft. $\frac{7}{8}$ in.
Height top of rail to bearing face of centre plate	2 ft. 8 $\frac{1}{4}$ in.
Height top of rail over runningboard	12 ft. 10 $\frac{3}{8}$ in.
Height top of rail over runningboard hand	

rail	15 ft. 3 in.
Height top of rail over brake mast	13 ft. 5 $\frac{3}{8}$ in.
Height top of rail to centre of buffer	3 ft. 5 $\frac{3}{8}$ in.
Height inside at centre (clear)	8 ft. 2 in.
Height of side door opening	7 ft. 1 $\frac{3}{8}$ in.
Centre to centre of lamp brackets	10 ft. 2 1-16 in.
Centre to centre of trucks	30 ft. 9 in.
Centre to centre of buffers	5 ft. 10 $\frac{1}{2}$ in.
Truck wheelbase	6 ft. 3 in.
Total wheelbase of car	37 ft.
Capacity of car	80,000 lbs.
Capacity of axles (each)	38,000 lb. (Size of journal 5 $\frac{1}{2}$ in. by 10 in. M.C.B. std.)
Diameter of wheels	41 $\frac{3}{8}$ in. (M.C.B. std. cast iron chilled tread and flange).
Weight of wheels (each)	1,025 lb.

The cars are being shipped knocked down, the underframe all in one piece, with floor laid, and are routed via the Panama Canal to Vladivostok, where they will be assembled. The first vessel with 175 cars left Sept. 7.

conditions the manners of the old world that so well became him, and to the end of his long career retained the respect and honor of all. In the social directions in which he was interested, apart from his business affairs, he assumed with the quiet modesty which distinguished him, a role that gave those movements a stability and an influence which they would not otherwise have possessed."

**Location of Emergency Valve on Passenger Cars.**

G. Spencer, Chief Operating Officer, Board of Railway Commissioners, sent the following memorandum to the Secretary of the Board, Sept. 15:—

Re Mr. Barry's letter of May 5 bringing up the question of having the conductor's valve or emergency valve placed in a prominent position and stencilled or otherwise indicated, so that in the event of an accident or emergency case cropping up any person in the car might operate the valve and stop the train. This case was considered and heard at Ottawa, Jan. 7, 1913. At that time no action was considered necessary. The different companies were to send in plans, specifications and data. These we have on file. In addition, I have had investigations made and find that the number of valves, their location, and the cord attachments are by no means standard. A great many of the valves have no cord attachments and the handles for operating them do not all work the same way.

The Master Car Builders' Association meeting at Chicago, in May of this year, recommended that

"All passenger equipment cars to be fitted with one or more conductors' valves. If one valve is used it is to be connected with a cord running the full length of the car. If the construction of the car does not permit the use of a cord running the full length, two valves should be used, one located at each end of the car, with a cord as long as practical."

After discussing the matter thoroughly with the different members of the staff in this department, I am of the opinion that it is very desirable in the interests of safety that the position of these valves be standardized, and that the cord or handle in the body of the car or compartment occupied by passengers be so placed and stencilled so that it will be understood what its functions are. These valves should be placed at the end of the car and outside of it, with a handle which trainmen can use in case of necessity and a cord attachment running to the inside of the car, as stated above. On cars with vestibules, the valves should be placed at the end of the vestibule over the doorway, and non vestibule cars on the end of the car (bulkhead) handle outside, and in both cases handle to operate so that it would open by being pulled up rather than pulled down, the cord from this valve handle to go through to the body of the car in all cases, and the handle on the cord in the body of the car to be stencilled 'Emergency Valve.'

On Sept. 18 the Secretary of the Board transmitted a copy of the memo to railway companies, and asked them to submit comments on it within 30 days.

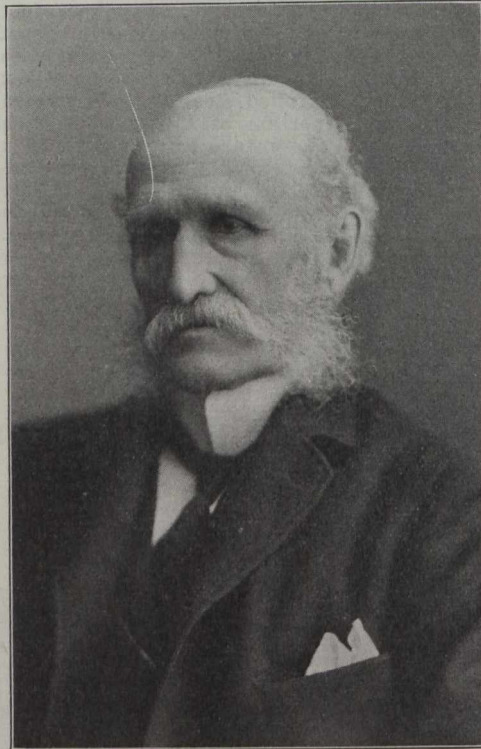
**Railway Extensions in South Africa.**—The Union Government of South Africa has completed railway connections with the lines connecting with Walfisch Bay, in the country formerly known as German Southwest Africa, but which has been absorbed into the Union, and has established the Government gauge throughout. The change on the last section of 32 miles was completed in 50 hours, thus constituting a South African record.

**Death of Harry Braithwaite Abbott at Vancouver.**

Harry Braithwaite Abbott, M. Can. Soc. C.E., who died at Vancouver, B.C., Sept. 14, of pneumonia after only a few days illness, was the son of the late Rev. Joseph Abbott, first Anglican incumbent of St. Andrews, Argenteuil, Que., by his wife Harriet Elizabeth, daughter of the Rev. Richard Bradford, first rector of Chatham, Que. He was born at Abbotsford, Que., June 14, 1829, educated at the High School, Montreal, and at McGill University, and commenced his professional career on the engineering staff of the St. Lawrence and Atlantic Ry., now part of the Grand Trunk. On the completion of the line he was appointed resident engineer of one of the divisions. This position he resigned in 1857, to take the contract with the late C. Freer, on the Grand Trunk. Later he and Mr. Freer leased the Riviere du Loup section of the Grand Trunk, which they opened up and operated for a year. They also operated the Carillon and Grenville Ry. until its purchase by the Ottawa River Navigation Co. In 1864 Mr. Abbott assumed the control of the Brockville and Ottawa Ry., filling the position of Chief Engineer, and in 1872 he built the Carleton Place and Ottawa branch of the Canada Central Ry. He was for some time President and Managing Director of the former road, and Managing Director of the latter. In 1876 he organized the Eastern Extension Ry. Co., and was appointed Chief Engineer and Manager of Construction. His connection with the Canadian Pacific Ry. dated from 1882, when he was appointed Manager of construction of the Sault Ste. Marie Branch. After completing this work he was appointed Manager of Construction of the main line west from Sudbury. He was in charge of this division at the outbreak of the rebellion in the Northwest Territories, and the arrangements for the conveyance of the troops sent from the east for its suppression were carried out by him. After having served as Supervising Engineer, he was appointed in 1886 as the first General Superintendent of the C.P.R. in British Columbia, from which position he retired, March, 1897, when he was offered, but declined, an advisory position. He was admitted as a member of the Canadian Society of Civil Engineers in 1887, and served as a member of its council. During the Trent affair, he assisted in raising the 11th Battalion V.M. Argenteuil Rangers, and served under the command of his brother, the late Sir J. J. C. Abbott (afterwards Premier of Canada), for a considerable period, finally retiring with the rank of Major. He unsuccessfully contested Brockville in the Conservative interest at the Dominion general election in 1872, and East Algoma for the Ontario Legislature in 1886. He was a member of the Church of England. He married Margaret Amelia, daughter of the late

Mr. Justice Sicotte, and widow of C. Freer, who predeceased him by a number of years.

Mr. Abbott was one of the earliest residents of Vancouver, and as the chief C.P.R.



Harry Braithwaite Abbott, M. Can. Soc. C.E.

official there for a number of years occupied a leading position in its public and social life. He was Honorary Life President of the Vancouver Club and a member of many other local organizations. Besides being an expert rifle shot and billiard player, he was an enthusiastic fisherman, and keenly enjoyed golf. Only a week before his death, notwithstanding his 87 years of age, he attended a recruiting meeting.

The Vancouver Province says of him: "Mr. Abbott saw the townsite which he laid out grow into importance and go through those periods of sensation which may be compared to the maladies and slight fevers of childhood. He saw it grow into a city that attracted visitors and residents from all over the world, and in those days he occupied a position of leadership and much influence. Always a worker rather than a talker, he never joined the ranks of the loquacious, and he certainly never played to the gallery. He lived his life as a quiet Canadian citizen, who retained in the midst of the necessary rawness of western

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## Progress of Rogers Pass Tunnel Construction, Canadian Pacific Railway.

The following table, for which we are indebted to J. G. Sullivan, Chief Engineer, C.P.R., Winnipeg, shows the progress made from July 29 to Sept. 2, also the total progress to Sept. 2. The figures give the number of feet:

EAST END.		
Pioneer heading .....	Complete	10,740
Main heading .....	1,455	7,999
Main tunnel .....	690	5,906
WEST END.		
Pioneer heading .....	Complete	8,870
Main heading .....	1,400	8,869
Main tunnel .....	951	4,705

## Sir William Van Horne's Appreciation of Canadian Railway and Marine World.

Before starting the publication of the Railway and Shipping World (now Canadian Railway and Marine World) in 1898, its founder consulted several of the principal Canadian railway officials, among them Sir William Van Horne, who, while sympathetically friendly to the project, doubted whether it could be made a financial success. But from the issue of its first number he evinced a keen interest in it, received it regularly, and took many occasions to recommend it. Only last year he wrote our Managing Director as follows:

"Montreal, Jan. 31, 1914.

"My dear Burrows,—I have just now been looking over the last number of your Canadian Railway and Marine World, and I am more than ever struck by the extraordinary amount and the high character of the information it contains, which puts it on a par with or even beyond any railway journal I know.

"I remember the doubts I expressed to you at the time you started it, and I feel bound to confess the extent of my mistake, and to congratulate you warmly on your splendid success.

"Sincerely yours,  
W. C. VAN HORNE."

"P.S.—I am still confined to my room, but am beginning to hobble about on crutches. I have just found the photograph you ask for and send it herewith."

[The photograph referred to is the one reproduced on the first page of this issue.—EDITOR.]

The International Engineering Congress, which concluded its sittings at San Francisco, Cal., Sept. 25, arranged for a series of excursions to be held subsequently so that the members could return to their homes by a number of routes. One of these trips was arranged from San Francisco, via Portland, Ore., to Seattle, Wash., thence by steamship to Victoria and Vancouver, and by special train on the C.P.R. and its Minneapolis, St. Paul and Sault Ste. Marie Ry. and other connections to New York. The special train was timed to leave Vancouver Sept. 30, and it was expected to reach Chicago about Oct. 7.

The G. T. R. Stratford Division Patriotic Association, Palmerston Branch, has been formed to raise funds among the company's local employes, for patriotic purposes, by means of monthly contributions. C. Forrester, Superintendent, Stratford Division, Ontario Lines, G. T. R., has been elected President.

Dominion Government Elevators.—The completion of the Government elevator at Calgary, Alta., makes a chain of Government elevators from Calgary to the head of the lakes. The capacity of this elevator is about 2,500,000 bush.

## Putting Municipal and Private Utilities on a Par.

New evidence of the spreading tendency in the United States to subject all municipally owned utilities, like electricity and gas works, street railways, etc., to the same standards of operation and finance that are applied to public service companies under private ownership is seen in a recent decision of the California Railroad Commission. The City and County of San Francisco applied for permission to carry the Municipal Ry. tracks on Potrero Ave. at grade across two main tracks and a siding of the Southern Pacific Co. It further asked that the expense of maintaining the main line crossing be ordered divided between the municipality and the railway and that the spur crossing be maintained by the railway. Special privilege was claimed by virtue of being a municipal corporation. Investigation showed that the railway had a franchise from the city permitting it to cross Potrero Ave., with its two main tracks, but that the siding existed only on sufferance. Permission was granted the city to make the crossing, but the entire expense of construction and maintenance was imposed on the Municipal Ry., under the usual rule of imposing the burden of a grade crossing on the junior company. Municipal privilege was specifically denied, and certain similar cases in Los Angeles were cited as precedent.

## The Ownership of a B. C. Logging Railway.

—The question of the ownership of a logging railway from Powell Lake to the seacoast in British Columbia came before a court at Vancouver, Sept. 2, upon an application of the Powell River Co. for an injunction to restrain the Jordan River Lumber Co., Elder Bros., and other lumber operators from using this railway. The plaintiff company owns the townsite of Powell River, which is crossed by the railway which runs from Powell Lake to Malaspina Strait. The Canadian-Puget Sound Co. had a 10 year contract for the use of the railway, and the plaintiffs desire that the defendant companies be enjoined from using the line. Counsel for Elder Bros., contended that the plaintiffs were putting quite a wrong interpretation upon the facts, as the line which was the property of the Canadian-Puget Sound Lumber Co., had been transferred to his clients. Elder Bros. had been using the line since May, and were shipping 150,000 ft. of logs daily over it. The hearing was adjourned.

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

	Acres.
Calgary and Edmonton Ry. ....	319.00
Canadian Northern Ry .....	643.00
Canadian Pacific Ry. ....	6.85
Edmonton, Dunvegan and British Columbia Ry. ....	36.10
Grand Trunk Pacific Branch Lines Co. . .	6.16
Qu'Appelle, Long Lake and Saskatchewan Rd. and Steamboat Co. ....	2,880.00
Total .....	3,891.11

Railway Route Map Approved.—The Minister of Railways and Canals approved, on Sept. 1, the general location of a branch line of the Edmonton, Dunvegan and British Columbia Ry., from Spirit River Settlement, near Dunvegan, southerly to Grand Prairie Settlement, about 50 miles.

The G. T. R. Barrie Division Railwaymen's Association is making its first contribution of a fully equipped motor ambulance for European service, and is co-operating with the Red Cross Society in field comfort work.

# Transportation Appointments Throughout Canada.

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

**Canadian Government Railways.**—J. A. HUMBLE has been appointed Claims Agent for the territory from Moncton to Campbellton and subdivisions (Intercolonial Ry.), Campbellton to St. Leonards (International Ry. of N. B.), Centreville to Gagetown (St. John & Quebec Ry.), and Moncton to Edmundston (National Transcontinental Ry.). Office, Moncton, N. B.

W. D. STEWART, heretofore foreman of erecting shop, Intercolonial Ry., Moncton, N. B., has been appointed Assistant to the General Storekeeper, with office for the present at Transcona, Man.

See also Intercolonial Ry. and National Transcontinental Ry.

**Canadian Northern Ry.**—The Quebec Grand Division and the Ontario Grand Division have been renamed Quebec Lines and Ontario Lines respectively.

W. A. KINGSLAND, heretofore Local Auditor, Quebec Lines, Quebec, Que., has been appointed General Superintendent, Quebec Lines, vice F. M. Spaidal, deceased. Office, Montreal.

JAMES ORR, heretofore in the General Traffic Manager's office, Toronto, has been appointed Assistant to the General Traffic Manager, there.

S. J. HUNGERFORD, Superintendent of Rolling Stock, has had his office moved from Winnipeg to Toronto, his jurisdiction having been extended over the whole system, as announced in a previous issue.

A. L. GRABURN, heretofore Mechanical Engineer, Toronto, has been appointed Assistant Superintendent of Rolling Stock. Office, Toronto.

Canadian Railway and Marine World for September contained particulars of the subdivision of the Ontario Grand Division into the Toronto District and the Lake Superior District and gave a complete list of the operating and maintenance officials thereon. Following are additional particulars in regard to the officials and their previous positions:

J. IRWIN, heretofore Superintendent, District 1, Western Division, Dauphin, Man., has been appointed Superintendent, Toronto District, Ontario Division. Office, Rosedale, Toronto.

G. COLLINS, heretofore Superintendent, Ottawa Division, Trenton, Ont., has been appointed Superintendent, Branch Lines, Toronto District, with jurisdiction over Picton, Maynooth, Tweed, Irondale and Kingston Subdivisions, reporting to the Superintendent, Toronto District. Office, Trenton, Ont.

W. C. MOORE, heretofore Master Mechanic, Ottawa Division, Trenton, Ont., has been appointed Master Mechanic, Toronto District, reporting to the Superintendent. Office, Trenton, Ont.

O. OGDEN, heretofore Supervisor of Track, Ottawa, Ont., has been appointed Supervisor of Track, with jurisdiction over Rideau and Brockville Subdivisions, Toronto District. Office, Trenton, Ont.

J. McDONALD, heretofore Supervisor of Track, Central Ontario, Quinte and Kingston Districts, Trenton, Ont., has been appointed Supervisor of Track with jurisdiction over Maynooth, Picton, Irondale and Tweed Subdivisions, Toronto District. Office, Trenton, Ont.

W. R. KELLY, heretofore Assistant Superintendent, Ottawa Division, Trenton, Ont., has been appointed Assistant Superintendent, Toronto Division, with jurisdiction over the Parry Sound, Orillia, Toronto

Terminals, Trenton, Rideau and Brockville Subdivisions. Office, Rosedale, Toronto.

J. D. EVANS, heretofore Division Engineer, Ottawa Division, Trenton, Ont., has been appointed Supervisor of Bridges and Buildings, with jurisdiction over Maynooth, Picton, Irondale and Tweed Subdivisions, Toronto District. Office, Trenton, Ont.

P. H. FOX, heretofore Chief Dispatcher, Trenton, Ont., has been appointed Chief Dispatcher, Toronto District. Office, Rosedale, Toronto.

G. P. MacLAREN, heretofore Division Engineer, Mackenzie, Mann & Co., Ltd., North Bay, Ont., has been appointed Division Engineer, Toronto District, reporting to Superintendent. Office, Rosedale, Toronto.

E. MYERS, heretofore Roadmaster, Trenton, Ont., has been appointed Supervisor of Track, with jurisdiction over Toronto Terminals, Parry Sound and Trenton Subdivisions. Office, Rosedale, Toronto.

J. H. McALPINE, heretofore Locomotive



P. J. Flynn,  
Superintendent, Districts 2 and 3, Central Division, Canadian Northern Railway.

Foreman, Winnipeg, has been appointed Master Mechanic, Lake Superior District, reporting to the Superintendent. Office, Parry Sound, Ont.

A. J. GAYFER, heretofore Division Engineer, Mackenzie, Mann & Co., Ltd., Port Arthur, Ont., has been appointed Trainmaster, with jurisdiction over Ruel, Oba, Long Lake and Nipigon Subdivisions, Lake Superior District, and also Division Engineer, Lake Superior District. Office, Hornepayne, Ont.

W. M. JACKLIN, heretofore Inspector of Tracklaying on Construction, Port Arthur, Ont., has been appointed Supervisor of Roadway, including track, bridges and buildings, with jurisdiction over Nipigon and Long Lake Subdivisions, Lake Superior District. Office, Hornepayne, Ont.

W. J. CURLE, heretofore Superintendent, Toronto Division, Toronto, has been appointed Superintendent, Lake Superior District, except Nipigon Subdivision. Office, Capreol, Ont.

J. E. CATHER, heretofore Chief Dis-

patcher, Rosedale, Toronto, has been appointed Chief Dispatcher, Lake Superior District, except Nipigon Subdivision. Office, Capreol, Ont.

J. R. AUDET, heretofore with Foley Bros. and Northern Construction Co. on C. N. R. construction, has been appointed Supervisor of Roadway, including track, bridges and buildings, with jurisdiction over Ruel and Oba Subdivisions, Lake Superior District. Office, Capreol, Ont.

E. HAYSTEAD, heretofore Supervisor of Track, Parry Sound, Ont., has been appointed Supervisor of Track with jurisdiction over Sudbury and North Bay Subdivision, Lake Superior District. Office, Capreol, Ont.

F. McKAY, heretofore Supervisor of Bridges and Buildings, Toronto, has been appointed Supervisor of Bridges and Buildings, with jurisdiction over Sudbury and North Bay Subdivisions, Lake Superior District. Office, Capreol, Ont.

J. E. NELSON, heretofore Superintendent, District 1, Central Division, Port Arthur, Ont., has been appointed Superintendent, Nipigon Subdivision, Lake Superior District. Office, Port Arthur, Ont.

T. J. BROWN, heretofore Chief Dispatcher, District 1, Central Division, Port Arthur, Ont., has been appointed Chief Dispatcher, Nipigon Subdivision, Lake Superior District. Office, Port Arthur, Ont.

P. J. FLYNN, heretofore Manager, Fort Garry Union Terminals, Winnipeg, has been appointed Superintendent, Districts 2 and 3, Central Division, Canadian Northern Ry., vice M. B. Murphy, transferred to Western Division. Office, Winnipeg.

P. SPENCE, heretofore Locomotive Foreman, Saskatoon, Sask., has been appointed Locomotive Foreman, Winnipeg, Man., vice J. H. McAlpine, whose appointment as Master Mechanic, Parry Sound, Ont., was announced in our last issue.

A. H. EAGER, Superintendent of Shops, Winnipeg, has been appointed Assistant Superintendent of Rolling Stock. Office, Winnipeg.

A. McCOWAN, General Car Foreman, Winnipeg, has been appointed Supervisor of Car Work, there.

H. W. ANDREW, coach yard foreman, Winnipeg, has been appointed General Car Foreman there, vice A. McCowan, promoted.

J. E. JOHNSTON, night coach foreman, Winnipeg, has been appointed coach yard foreman there, vice H. W. Andrew, promoted.

J. A. DAWSON is reported to have been appointed assistant yard foreman, Winnipeg, vice J. E. Johnston, promoted.

E. H. DREW has been appointed Sleeping and Dining Car Inspector, Western Lines, Sleeping, Dining and Parlor Cars and News Departments.

I. L. BOOMER, heretofore Superintendent, District 4, Western Division, Calgary, Alta., has been appointed Superintendent, District 4, Central Division, vice W. E. Roberts, transferred to Western Division. Office, Brandon, Man.

W. E. ROBERTS, heretofore Superintendent, District 4, Central Division, Brandon, Man., has been appointed Superintendent, District 1, Western Division, vice J. Irwin, transferred to Ontario Lines. Office, Dauphin, Man.

C. E. LEPARD, heretofore in Locomotive Foreman's office, Regina, Sask., has been appointed Divisional Storekeeper, Regina, Sask., vice J. Butterfield, enlisted for active service.

A. T. HANNAH, heretofore Assistant Foreman, Saskatoon, Sask., has been appointed Locomotive Foreman, Humboldt,

Sask., vice W. B. Steeves, transferred to Saskatoon, Sask.

W. B. STEEVES, heretofore Locomotive Foreman, Humboldt, Sask., has been appointed Locomotive Foreman, Saskatoon, Sask., vice P. Spence, transferred to Winnipeg.

M. B. MURPHY, heretofore Superintendent, Districts 2 and 3, Central Division, Winnipeg, has been appointed Superintendent, District 4, Western Division, vice I. L. Boomer, transferred to Central Division. Office, Calgary, Alta.

**Canadian Pacific Railway.**—GORDON SPROULE has been appointed acting Engineer of Tests, vice E. B. Tilt, who has resigned from the service. Office, Montreal.

E. ELEY, heretofore Divisional Car Foreman, North Bay, Ont., has been appointed Master Car Builder, Eastern Lines, vice F. B. Zercher, who has left the service. Office, Montreal.

W. M. KIRKPATRICK, Assistant Freight Traffic Manager, Montreal, having been appointed an officer in the 87th Overseas Battalion, Canadian Grenadier Guards, the following four appointments have been made until he returns to the company's service:

H. E. MacDONELL, heretofore General Freight Agent, Eastern Division, Montreal, will perform the present duties of the Assistant Freight Traffic Manager. Office, Montreal.

E. N. TODD, heretofore Division Freight Agent, Eastern Division, Montreal, will perform the present duties of the General Freight Agent, Eastern Division, vice H. E. MacDonell. Office, Montreal.

A. O. SECORD, heretofore District Freight Agent, Ottawa, Ont., will perform the present duties of the Division Freight Agent, Eastern Division, vice E. N. Todd. Office, Montreal.

J. J. KELLY will perform the present duties of the District Freight Agent, Ottawa, Ont., vice A. O. Secord.

G. J. FOX, heretofore Yardmaster, Swift Current, Sask., has been appointed Yardmaster, Fort William, Ont.

F. PLAYER has been appointed station master, Moose Jaw, Sask., vice J. T. Turner, promoted.

J. T. TURNER, heretofore station master, Moose Jaw, Sask., has been appointed Yardmaster, Swift Current, Sask., vice G. J. Fox, transferred.

J. GRAHAM, heretofore Assistant Roadmaster, North Bend, B.C., has been appointed Roadmaster, Nelson, B. C.

J. A. MARTIN has been appointed Assistant Manager, Ocean Services. Office, Royal Liver Building, Liverpool, England.

R. E. LARMOUR, heretofore Assistant General Freight Agent, Vancouver, B. C., has been appointed General Agent, Freight Department, New York, vice W. F. Stevenson, deceased. Office, 1550 Woolworth Building.

**Grand Trunk Pacific Ry.**—W. E. BELL has been appointed acting Chief Assistant to Manager of Telegraphs, G.T.R. and G.T.P.R., during absence on leave of A. P. Linnell. Office, Montreal.

C. E. BROOKS, heretofore acting Superintendent of Motive Power, has been appointed Superintendent of Motive Power, and will also assume the duties of Master Car Builder, J. L. Hodgson having resigned to enter National Transcontinental Ry. service. Office, Transcona, Man.

A. McTAVISH, heretofore Locomotive Foreman, Biggar, Sask., has been appointed Locomotive Inspector, to look after G.T.P.R. motive power equipment turned out of the Transcona shops by the National Transcontinental Ry.

E. HACKING, heretofore Car Foreman, Prince George, B.C., has been appointed

General Car Foreman, to look after G.T.P.R. car equipment turned out of the Transcona shops, now operated by the National Transcontinental Ry.

R. P. GRAVES, heretofore Resident Engineer, Fort William, Ont., has been transferred west of Winnipeg.

H. DARBY has been appointed acting Locomotive Foreman, Biggar, Sask., vice A. McTavish, promoted.

J. A. BRYANT, heretofore General Yardmaster, Mission Yard, Fort William, Ont., has been transferred to Edmonton, Alta.

J. A. BRYANT, heretofore General Yardmaster, Fort William, Ont., has been appointed Yardmaster, Edmonton, Alta., vice C. W. Sweet, assigned to other duties.

C. A. MUNRO has been appointed Car Foreman, Prince George, B.C., vice E. Hacking, promoted.

The following station agents have been appointed,—Fort Qu'Appelle, Sask., A. G. Redford; Mawer, Sask., — Pelland; Frobisher, Sask., J. R. Wilson; Irma, Alta., H. F. Jones; Viking, Alta., T. W. MacKenzie; Calgary, Alta., J. L. Dodds.

**Grand Trunk Ry.**—W. E. BELL has been appointed acting Chief Assistant to Manager of Telegraphs, G.T.R. and G.T.P.R., during absence on leave, of A. P. Linnell. Office, Montreal.

The following station agents have been appointed,—St. Rosalie Jct., Que., passenger, J. A. Tardif; Goodwood, Ont., J. F. Reid; Limehouse, Ont., W. L. Milliere; Port Dover, Ont., W. A. Murray; Harrisburg, Ont., H. W. Sussex; Centralia, Ont., P. B. Wade.

Through the utilization of an unconfirmed item, published in an English paper, it was announced in our last issue that E. J. Wearing had been appointed acting General Assistant, G.T.R. and Canadian Express Co., Liverpool, England, vice W. Cuthbertson, deceased. We are officially advised that the position of General Assistant has been abolished, temporarily at least. E. J. WEARING is Passenger Agent, G.T.R., and has also been appointed acting General Agent, Canadian Ex. Co., and J. M. CHARLES is Freight Agent, G.T.R. Offices, 20 Water St., Liverpool, England.

**Intercolonial Ry.**—C. W. BLEAKNEY is reported to have been appointed foreman of machine shop, Moncton, N.B., vice Jas. Starkey, transferred.

J. STARKEY, foreman of machine shop, Moncton, N.B., is reported to have been appointed foreman of erecting shop there, vice W. D. Stewart, appointed Assistant to General Storekeeper, Canadian Government Railways, Transcona, Man.

**National Transcontinental Ry.**—H. BAILEY, formerly Bridge and Building Master, Dominion Atlantic Ry., Yarmouth, N.S., has been appointed Bridge and Building Master, District 1, N.T.R., vice P. J. Henselwood, resigned. Office, Parent, Que.

J. E. SIMPSON has been appointed Roadmaster, Quebec and Fitzpatrick Subdivisions, vice A. Beauseigle. Headquarters, Parent, Que.

M. J. SHERIDAN has been appointed acting Roadmaster between mileage 109.5, Cochrane Subdivision, and mileage 63.4, Grant Subdivision, vice J. Wilson. Headquarters, Grant, Ont.

P. BARNARD has been appointed Roadmaster, Graham Subdivision, Redditt to Graham. Headquarters, Graham, Ont.

D. CAMPBELL has been appointed Bridge and Building Master, Winnipeg to Fort William. Headquarters, Fort William, Ont.

A. M. MACGILLIVRAY has been appointed Resident Engineer, Winnipeg to Fort William, vice R. P. Graves. Office, Fort William, Ont.

R. A. POSTANS has been appointed Road-

master, Lake Superior Branch, Fort William to Graham. Headquarters, Fort William, Ont.

C. H. LUNDGREN has been appointed General Yardmaster, Mission Yard, Fort William, Ont., vice J. A. Bryant.

J. L. HODGSON, heretofore Master Car Builder, Grand Trunk Pacific Ry., has been appointed General Car Foreman, N.T.R., in charge of Car Department, Transcona, Man., and of Car Department at divisional points, Transcona to Fort William inclusive. Office, Transcona, Man.

J. A. MITCHELL has been appointed General Foreman in charge of Motive Power Department, Transcona, Man.

G. E. McGUIRE has been appointed General Yardmaster, Transcona, Man.

H. McCORMICK has been appointed Roadmaster, Winnipeg Subdivision, Winnipeg to Redditt. Headquarters, Transcona, Man.

R. KING, heretofore Agent, C.P.R., Cornwall, Ont., has been appointed Assistant Superintendent, District 3, N.T.R. Office, Winnipeg, Man.

D. W. STEEPER, heretofore Trainmaster, G.T. Pacific Ry., Graham, Ont., is now engaged as a passenger conductor, N.T.R., between Graham, Ont., and Winnipeg, Man.

Dr. JOHN M. LENEY has been appointed Assistant Chief Medical Officer, with jurisdiction from Cochrane to Winnipeg and from Lake Superior Jct. to Fort William. Office, Winnipeg.

**New York Central Rd.**—The position of Superintendent of Rolling Stock has been created for the district west of Buffalo, N. Y., by separation from the Motive Power Department, and all employes and appurtenances connected with these departments have been separated for maintenance and operation accordingly.

W. O. THOMPSON, heretofore District Master Car Builder, East Buffalo, N.Y., has been appointed Superintendent of Rolling Stock, West of Buffalo, N.Y. Office, Cleveland, Ohio.

D. R. MacBAIN, Superintendent of Motive Power, West of Buffalo, continues in that position.

**St. John and Quebec Ry.**—W. M. DUNLOP, Chartered Accountant, Ottawa, Ont., has been appointed Commissioner for adjusting claims against the company, by the New Brunswick Government, which has taken over the line, owing to default.

**Thousand Islands Ry., Oshawa Ry.**—H. W. COOPER, heretofore Secretary-Treasurer, has been appointed Manager, vice J. F. Chapman, deceased. Office, Gananoque, Ont.

J. H. VALLEAU has been appointed Secretary-Treasurer, vice H. W. Cooper, appointed Manager. Office, Gananoque, Ont.

**Wabash Rd.**—W. A. HOPKINS, heretofore Division Freight Agent, Toledo, Ohio, has been appointed General Live Stock Agent, vice J. L. Harris, resigned to accept service elsewhere. Office, St. Louis, Mo.

R. A. BROWN, heretofore Travelling Freight Agent, Buffalo, N.Y., has been appointed Commercial Agent, Cleveland, Ohio, vice D. E. Gilbert, promoted.

T. A. SHERWOOD, heretofore Travelling Freight Agent, Memphis, Tenn., has been appointed Travelling Freight Agent, Buffalo, N.Y., vice R. A. Brown, promoted.

**Winnipeg Joint Terminals.**—H. J. HUNT, heretofore Trainmaster, has been appointed acting Terminals Manager, vice P. J. Flynn, resigned to enter C.N.R. service. Office, Winnipeg.

W. McAULEY, heretofore General Yardmaster, has been appointed Trainmaster, vice H. J. Hunt, promoted.

## Railway Development.

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

**Alberta and Great Waterways Ry.**—J. D. McArthur, President, is reported to have said Sept. 3, that track laying would be started immediately on the section of the line from Lac la Biche to Fort McMurray, 165 miles, and that, as the grading was practically completed, track laying was expected to be completed by Dec. 31. The line from Carbondale, the junction with the Edmonton, Dunvegan and British Columbia Ry., to Lac la Biche, 114 miles, is reported to be practically ready for traffic. (Sept., pg. 341.)

**Alberta Oil Fields.**—E. A. Cunningham, of the Alberta Petroleum Consolidated Co., Calgary, is reported to have said recently:—"The key to the oil situation is transportation and refining. As to the former we have a railway planned to tap the northern field, and we are working to get thing started."

**Athabasca and Fort Vermillion Ry.**—The preliminary survey being made for a projected railway from Athabasca Landing to Fort Vermillion, is reported to have located two possible points for the building of a bridge across the Athabasca River, and to have reached Wabiscaw, on the survey for the best route to Fort Vermillion. C. F. Law, who represents the D. A. Thomas interests in Vancouver, and A. C. Galbraith, Chief Engineer of the A. and F. V. R., left Edmonton, Alta., Aug. 27, for Fort Vermillion, where they expect to meet the survey party. The other projects in which the Thomas interests are concerned are the Pacific, Peace River and Athabasca Ry., and the Peace River Tramway and Navigation Co. (Sept., pg. 341.)

**Burrard Inlet Tunnel and Bridge Co.**—At the annual meeting of the shareholders in North Vancouver, B. C., Sept. 8, it was reported that none of the plans submitted by the Board were acceptable to the Provincial Government, without considerable alterations, and that the Government would not agree to any work being started on the bridge until complete arrangements had been made for the money necessary to finish it. The funds available amount to \$1,500,000, while the lowest tender on the present plans is \$1,744,831. The Dominion subsidy is contingent upon the bridge being completed by Aug. 1917, and the company's present charter expires in April 1916. It was decided to apply for an extension of time for construction of the bridge, and for a renewal of the Dominion subsidy. The directors for the current year are:—F. L. M. Carter-Cotton, President; Mayor Taylor, Vice President; Aldermen Woodside, McLurg, Foreman and Councillor Loutet. These represent the several municipalities interested in the construction of the bridge.

**Central Canada Ry.**—J. D. McArthur, President, is reported to have said in an interview, Sept. 3, that all the grading was under way to the proposed crossing of Peace River, and that sufficient progress had been made to warrant him in stating that track laying would be completed by the end of the year. The line starts at McLennan, on the Edmonton, Dunvegan and British Columbia Ry., and was completed to mileage 28 in 1914, track being laid on this mileage in the spring. The grading now in progress consists of 22 miles of rather difficult work. (July, pg. 255.)

**Dominion Government Railway to Hudson Bay.**—The contractor, J. D. McArthur, is reported to have said in an interview recently, that the accident early in the summer, when

the trestle bridge over Armstrong Lake gave way, had not interfered materially with the summer's work on the line. When the two big bridges are completed over the Nelson River, which it is expected will be the case next spring, he anticipates that there will be very little work left to be done to complete the line for operation. At the time of the accident a locomotive and a track layer were precipitated into the lake, these have been definitely located, and it is expected that they will be recovered during the winter.

From the experiences of the past summer it is believed that navigation of the Hudson Strait and Bay will be possible in July. The supply boats have left the wireless equipment for installation at several points on the straits and bay. Five dipper and clam shell dredges have been built at Port Nelson for harbor dredging work. Good progress is being made with the laying out of the railway terminals at Port Nelson, the work being reported to be in charge of Engineer Bayfield, who is said to have replaced Engineer McLachlan, formerly in charge. (Sept., pg. 348.)

**Edmonton, Dunvegan and British Columbia Ry.**—Track was reported, Sept. 3, to have been laid on the temporary bridge across the Big Smoky River, mileage 290 from Edmonton, Alta., and is being continued to the Spirit River, a further distance of 67 miles. Grading on the branch line to Grande Prairie, about 60 miles, let to J. Timothy, is reported to be well forward, and it is expected to have track laid on it by Dec. 31.

The permanent bridge over the Big Smoky River is in course of erection by the contractor for the steelwork, the Dominion Bridge Co. It will consist of 85 ft. deck plate girder approach spans, six 128 ft. deck truss spans, and one 125 ft. through truss span which will be erected over the navigable channel. (Aug., pg. 304.)

**Grand Trunk Ry.**—The Montreal City Council has adopted two reports of its railway engineer recommending that the Lachine, Jacques Cartier and Maisonneuve Ry., a G. T. R. subsidiary, be permitted to cross about 50 streets in the north end of the city. This is a projected line through the Maisonneuve manufacturing district, and considerable difficulty has been experienced in bringing the negotiations for the right of way to a successful issue. (Sept., pg. 345.)

**Great Northern Ry. (U. S. A.)**—Construction is reported to be in progress in the section of the Vancouver, Victoria and Eastern Ry. branch near Grand Forks, B. C., on a bridge over the North Fork Canyon. The new bridge will be 662 ft. long, on stone and concrete abutments. About 2,000 ft. of track has been laid to connect the branch with the C. P. R. branch to the Granby Smelter, pending the reconstruction of the bridge.

That plans for the G. N. R. station on the reclaimed land at False Creek, Vancouver, are being prepared in that city by F. Townley, was reported to the bridges and railway committee of the city council at a recent meeting. Under the Board of Railway Commissioners' order dated June 2, construction on the new station is to be started within six months. (Sept., pg. 349.)

**Intercolonial Ry.**—During the summer a large amount of ballast has been laid on the lines on Cape Breton Island, between Point Tupper and Sydney, while the bridges have all been overhauled and repaired. A new

timber bridge is being built at Grand Narrows, which will raise the track 4 ft. above the present level. The bridge is expected to be completed early in November.

The new station at Humphreys, N. B., was reported, Sept. 10, to be nearly completed, and the new freight shed at Levis, Que., replacing the one burned down, was expected to be completed Oct. 31. (Sept., pg. 341.)

**The International Union Terminals Co. of Seattle, Wash.,** through A. F. Gillies and E. C. Matheson, laid a proposal before the Bridge and Railway Committee of the Vancouver City Council, Aug. 30. The company proposes to lay out a union terminal on Burrard Inlet, between Main St. and Heatley Ave., with tunnels to False Creek, and an electric railway from Vancouver to Seattle, Wash., at which place the company plans to lay out a similar terminal. The officers of the company, it is stated, are: President, J. C. Eden; Vice President, M. McDougall; Treasurer, J. McMasters; and Secretary, F. C. Jackson, all of Seattle. The cost of the entire Canadian end of the project is mentioned as \$50,000,000, and the first unit would involve an expenditure of \$15,000,000. An option, it was said, had been secured on the Hastings Mill site. The financial end of the project would be handled by the Stone and Webster interests of Boston, Mass., and it was sought to arrange with the Western Canada Power Co. for the necessary power.

**Kettle Valley Lines.**—The extension from the Coquihalla summit to Hope on the Fraser River, is expected to be completed by Nov. 30. Track is being laid, and the erection of the 7,500 lineal feet of snow sheds is well forward. Track laying is being gone on with from the Hope end, and is reported to have reached Ladner Creek, where a steel bridge is being built. The bridge across the Fraser River at Hope has been completed, and the tracks connecting with the C. P. R. have been laid. (Sept., pg. 341.)

**Pacific Great Eastern Ry.**—It is expected to have the track laid and the line completed from Squamish, the seacoast terminal, as far as Clinton, B. C., this autumn. It is hoped to have track laid to the Hundred Mile House by Dec. 31. From Fort George about 50 miles of grading has been completed southerly, and it was reported, Sept. 5, that work on this section was at a standstill. (Sept., pg. 341.)

**Prince Edward Island Ry.**—Tenders are under consideration for the erection of a station building, water tank, locomotive house, transfer platform, standpipe pit, ash-pit and turntable foundations for the car ferry terminal at Carleton Point, P. E. I. The carrying out of this work will complete the works necessary for the operation of the car ferry to the mainland at Cape Tormentine, N. B.

The car ferry terminal works at Cape Tormentine are reported to be nearly completed. The last crib of the 1,070 ft. built was put in position recently, and is practically an extension of the previously existing breakwater. In this cribwork about 3,000,000 ft. of lumber, board measure, and 120,000 tons of stone have been used. As soon as the last crib is completed the work of driving the pile fender for the ferry will be gone on with. Two dredges are at work within the enclosed area dredging the approach to the ferry landing. A breakwater nearly 600 ft. long, and containing about 140,000 tons of stone is being built. The substructure work is also in a forward condition. The work is being carried out by A. T. Markle and the O'Brien and Doheney Co., with the Lynn Brennan Co. as subcontractors. F. P. Frupp, Ottawa, is Engineer in charge, with J. McLean as Assistant Engineer on the work.



**St. John and Quebec Ry.**—Under the act passed by the New Brunswick Legislature in the spring, the company's charter has been taken over by the Provincial Government, and a new board of directors has been appointed to complete the construction. The first work taken in hand by the new board is the adjustment and settlement of outstanding claims arising out of the construction of the 120 miles, between Gagetown and Centreville. This section is being operated by the Canadian Government Railways, under a contract. The uncompleted section of the line extends from Centreville to Grand Falls, and from Gagetown southerly to St. John. On this latter section three big bridges across the Kennebecasis and the St. John Rivers are necessary, the cost of which is to be borne by the Dominion Government.

A party of St. John business men visited the sites of the proposed crossing at the Mistake, Sept. 9. Borings are being made there, under the direction of the Provincial Government, to decide which site will be adopted. (Sept., pg. 341.)

**St. John and Quebec Ry.**—A meeting of the shareholders was held in the Provincial Government Buildings, Fredericton, N. B., Sept. 8, when the directors appointed recently by order-in-council, were elected directors for the current year. The directors subsequently elected the following officers: President, I. R. Todd, St. Stephen; First Vice President, R. O'Leary, Richibucto; Second Vice President, W. S. Fisher, St. John; Treasurer, J. D. Palmer, Fredericton; Secretary, E. Girouard, Moncton. Each of the five directors appointed has thus been elected to an office. It is said that as soon as questions connected with the adjustment of outstanding accounts are settled the directors will give consideration to the letting of contracts for the construction of the sections of the line from Centreville to Grand Falls, and from Gagetown southerly.

**Toronto, Hamilton and Buffalo Ry.**—G. A. Mountain, Chief Engineer of the Board of Railway Commissioners, visited Hamilton, Sept. 11, and inspected the King St. West bridge, which the city is asking to have widened and strengthened. The present bridge is 30 ft. wide, and the city desires that it be made 55 ft. wide. Mr. Mountain will report as to the plans, and the Board may make an order as to what, if anything, can be done, and how the cost is to be apportioned between the company and the city. (June, pg. 212.)

**Toronto Terminals Co.**—An order-in-council was passed at Ottawa, Sept. 4, providing for the building, at the cost of the Dominion Government, of the east wing of the new union station in Toronto, which will be used for post office purposes. It is said that there is now nothing in the way of an early start being made upon the erection of the new building. (Sept., pg. 349.)

**Gopher Extermination in the West.**—The Canadian Northern Ry. has since the early with instructions for its use, for the destruction of gophers in the districts through which it operates. The poison is mixed with wheat of inferior grade, which in most cases is supplied by local elevator companies, but where this cannot be arranged, wheat is purchased. Records of the cost, time, territory covered, and effectiveness of the poison are kept, which up to date show that the efforts made have proved efficacious. In most municipalities bylaws have been passed requiring farmers to destroy gophers on their lands, and the co-operation of the railway has been of considerable benefit in the efforts to exterminate the pest.

**Freight Rates on Steel from the United States to Saskatchewan and Alberta.**

Early in September, S. J. McLean, one of the Board of Railway Commissioners, gave the following opinion on the complaint of the Saskatchewan Bridge and Iron Co., of Moose Jaw, Sask., Chief Commissioner Sir Henry Drayton, concurring:—

The applicant desires to tender for building a bridge at Calgary, Alta. The situation is that steel is brought from Pittsburg, Pa., via. Minnesota Transfer (St. Paul) over the "Soo" line to Moose Jaw, where it is fabricated and then shipped on to Calgary. The applicant complains of being at a disadvantage of 12c as compared with the movement via. Winnipeg. Steel is shipped from Pittsburg via. Minnesota Transfer to Winnipeg, and thence shipped to Calgary. The rate situation is as follows:

Pittsburg-Minnesota Transfer (Commodity) .....	38.2c
Minnesota Transfer-Winnipeg (Class) .....	32 "
Winnipeg-Calgary (Class) .....	56 "
Through .....	126.2"
Pittsburg-Minnesota Transfer (Commodity) .....	38.2c
Minnesota Transfer-Moose Jaw (Class) .....	64 "
Via Portal (Soo Line) .....	36 "
Moose Jaw-Calgary (Class) .....	138.2"

Difference against Moose Jaw—12 cents.

Omitting the movement from Pittsburg to St. Paul, which is common both to the movement to Winnipeg and Moose Jaw, the situation is that the total mileage from St. Paul to Calgary, via. Winnipeg, is 1,295 miles; and from St. Paul to Calgary, via. Moose Jaw, it is 1,168 miles; that is to say, the movement by way of Winnipeg is 127 miles longer. The rate from St. Paul to Winnipeg is 32c. While the distance from St. Paul to Winnipeg is 458 miles, the rate is not made on that distance. The policy of the United States lines is to give Minneapolis and St. Paul the same rate as Duluth. Duluth is 397 miles from Winnipeg; consequently the St. Paul rate is made on this shorter mileage. The "town" tariff rate is not applicable on the movement from St. Paul to Emerson, nor is it applicable on the movement from Emerson to Winnipeg. If it had been applicable for the distance of 458 miles, the rate would have been 37c. If the traffic were moving the same distance in Canada between two points covered by the prairie scale, and if neither of these points was a "town" tariff point, the rate on the prairie mileage scale would be 44c. It is thus apparent that as the result of the Duluth rate controlling the St. Paul rate, the actual rate is 5c less than would have been applied on the actual movement from St. Paul if the Canadian "town" tariff rate had been applicable, and 12c less than would have been the case had the Canadian standard prairie scale applied. From Moose Jaw to Calgary, the distance is 438 miles. The "town" tariff rate applies. Consequently, in respect of the movement out of Winnipeg and a movement out of Moose Jaw, both are on the same basis, subject, of course, to the effect exercised by the tapering of the rate on the longer haul. On the movement from St. Paul to Moose Jaw, the "town" tariff rate does not apply. Of the total distance of 730 miles between these points, 168 miles, that is the distance between North Portal and Moose Jaw, is within Canada. On the 562 miles from St. Paul to the boundary, a higher rate basis applies than on the movement from Winnipeg. There is no "town" tariff from North Portal; and even if there were the advantage of the "town"

tariff would not be applicable unless the steel were stopped in transit at North Portal to be fabricated and shipped beyond. It may be noted that the rate charged is 2c higher than would be the case on the same mileage under the standard prairie scale.

To sum up the matter, the situation when analyzed is as follows: There is a low rate basis into Winnipeg which is brought about by the policy of the United States lines in making the Minneapolis and St. Paul-Winnipeg rate on the basis of the shorter mileage via Duluth. This rate is divided on percentages, and for the 66 miles from Emerson to Winnipeg the Canadian carrier receives 32½% of the rate, or 10.4c. At the same time, the haul by the Canadian carrier represents 14% on mileage. The rate being controlled as indicated, it happens that the division received, viz., 10.4c., is practically identical with the "town" tariff rate for the same distance, viz., 10.5c. On the movement from St. Paul to Moose Jaw, the factor of a correlated shorter mileage point is not present to hold down a portion of the rate. On the movement from the Canadian boundary at North Portal to Moose Jaw, 168 miles, no "town" tariff is applicable. On a movement of the same distance from a Canadian point into Winnipeg, no "town" tariff would be applicable. On the movement via Winnipeg, the "town" tariff is effective from Winnipeg to Calgary, 837 miles. On the movement via Moose Jaw, the "town" tariff is effective only from Moose Jaw to Calgary, 438 miles. Of the movement to Moose Jaw, 562 miles is within United States territory. The rate is higher than in Canada. The situation is, then, that for a haul of 730 miles to Moose Jaw, the rate charged is higher than it would be under the standard mileage of the prairie scale. There is no difference in rate treatment in respect of movements in Canada as between similar movements into and out of Winnipeg on the one hand and into and out of Moose Jaw on the other. There is a higher rate basis on the haul in the United States. Here the Board has no jurisdiction.

**Canadian Pacific Railway Construction, Betterments, Etc.**

**North Toronto Union Station.**—The corner stone of the new union station at North Toronto was laid Sept. 9, by Mayor Church, A. D. MacTier, General Manager, Eastern Lines, representing the C. P. R. A full illustrated description of the new building appeared in our August issue, page 298.

**Alberta Division.**—W. A. James, Division Engineer of Construction, Western Lines, arrived in Lethbridge, Aug. 25, and proceeded to Foremost, to take charge of track laying on 25 miles of the grading completed easterly on the Weyburn-Lethbridge line. The work is expected to be completed early in October.

A petition from farmers resident in the Kipp-Lomond district of Alberta has been forwarded to the C. P. R. by the Lethbridge Board of Trade, asking for the grading of an extension from Kipp to Lomond, the farmers offering to give one week's work of a man and team each. (Sept., pg. 349.)

**The Roadmasters' and Maintenance of Way Association's** annual convention was held at Chicago, Ill., Sept. 7 to 10. Following are the officers for the current year,—President, C. King, Jamaica, N. Y.; First Vice President, M. Burke, Chicago, Ill.; Second Vice President, A. Grills, General Roadmaster, G.T.R., St. Thomas, Ont.; Secretary, L. C. Ryan, Sterling, Ill.; Treasurer, W. H. Kofmehl, Elgin, Ill.

# Orders by the 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 filled our paper have a continuous record of the Board's proceedings. No other paper has done this.

The dates given of orders, immediately following the numbers, are those on which the orders were drawn.

Order 24102, as summarized in Canadian Railway and Marine World in September, has been cancelled and the following order substituted:

24102. Aug. 19.—Allowing increased rates on pulpwood to Mechanicville, N.Y., via Boston & Maine Rd., on Supplement 1 to C. P. R. joint freight tariff, C.R.C. no. E-2847, and Supplement 16 to G.T.R. Joint Freight Tariff, C.R.C. 2588; supplements to become effective not earlier than Nov. 1, and rescinding order 23020, Dec. 22, 1914.

24104. Aug. 19.—Ordering G.T.R. to switch cars in its service, and to interswitch cars in the service of any other railway with which it has a connection at Cobourg, to and from track on Esplanade alleged to be owned by the Town, when desired to do so by the Mayor in writing, in general terms on condition that G.T.R. shall not be responsible for collection from consignees of freight charges nor for damages to cars nor loss of contents while on siding, unless caused by or resulting from negligence of G.T.R., its servants or agents, and rescinding order 21976, June 12, 1914.

24105. Aug. 19.—Amending order 21181, Jan. 22, 1914, re provision of signalmen for interlocking plant at crossing by Campbellford, Lake Ontario and Western Ry. (C.P.R.) of G.T.R., at Cobourg, Ont.

24106. Aug. 19.—Allowing correction of error in plan, profile and book of reference to show land from station 5+60 to station 9+62, shown bordered yellow on plan, as being owned by the G.T.R., shown bordered green on revised plan marked A, instead of as being owned by Department of Railways and Canals.

24107. Aug. 19.—Relieving G.T.R. from providing further protection at second crossing south of Hespeler, Ont.

24108. Aug. 19.—Authorizing Alberta & Great Waterways Ry. to join its track with Edmonton, Dunvegan & British Columbia Ry.

24109. Aug. 19.—Authorizing Dominion Government, for Province of Ontario, to build highway crossing over Canadian Northern Ry. west of North Bay, about half a mile west of Meadowside, Pedley Tp., Ont.

24110. Aug. 16.—Authorizing London Railway Commission to build team tracks on north side of Bathurst St., from junction of London & Port Stanley Ry., on Bathurst St., near Burwell St., east to Adelaide St., London, Ont., no rail to be laid within 16 ft. south of street line; and authorizing it to build a track on north half of Bathurst St., from Richmond St. west to Thames St., track to be planked between rails to 18 in. on either side; track not to be used for storage purposes, and car not to be loaded on the highway.

24111. Aug. 21.—Authorizing C.P.R. to use bridge 24.2 over the Otonabee River, near Peterborough, Ont.

24112. Aug. 21.—Authorizing G.T.R. to use bridge over C.P.R. at Myrtle, Ont.

24113. Aug. 21.—Authorizing C.P.R. to use bridge 3416, Toronto Subdivision, at Cavan, Ont.

24114. Aug. 24.—Ordering G.T.R. forthwith to move station building at Mimico, Ont., from the present location to its original position, as near as may be to the south of track; station to be cleaned and put in proper order for use.

24115. Aug. 21.—Ordering Canadian Northern Ry. to build extra pen, of the same size as present one, at Waseca, Sask.; to be completed by Sept. 15.

24116. Aug. 20.—Approving changes in location of Montreal and Southern Counties Ry., from station 1765+05.9 to station 1788+02.9, St. Paul d'Abbotsford Parish, and authorizing the M. & S. C. R. to build across Jackmann's Road, Rouville County, Que.

24117. Aug. 20.—Approving plan and specifications showing work to be done on Wilson-Mathers Drain under G.T.R., near Sarnia.

24118. Aug. 24.—Authorizing C.P.R. to build road through Canmore station grounds, Alta., to cross Y to coal mine in n. e. ¼ Sec. 32-24-10, and cross its main line in s. w. ¼ Sec. 33-24-10, and to close portion of road allowance along eastern boundary of n. e. ¼ Sec. 32-24-10, w. 5 m., which lies within station grounds, except portion of road allowance within boundaries of proposed road.

24119. Aug. 20.—Approving plan, July 15, showing girder to be erected at trestle bridge over Shawinigan River, Que.

24120. Aug. 26.—Relieving speed restriction of 15 miles an hour imposed on that portion of C.P.R.'s Sheho Extension, from Leslie to Wynward, Sask., mileage 66.2 to 89.0.

24121. Aug. 26.—Authorizing Central Canada

Ry. to join Edmonton, Dunvegan and British Columbia Ry. in Tp. 77, R. 20, w. 5 m.

24122. Aug. 28.—Ordering that wages of watchmen at crossing of Winnipeg Electric Ry. and C.P.R. at Logan Ave., Winnipeg, Man., be paid by Winnipeg Electric Ry. as from Dec. 16, 1912.

24123. Aug. 28.—Authorizing Great Northern Ry. to remove regular agent at Baynes, B.C., on its Crowsnest Southern Line, caretaker to be appointed to attend to station and care for l.c.l. freight and express matter.

24124. July 31.—Extending, to Nov. 1, time within which G.T.R. shall complete highway crossing over its track in Tay Tp., Ont.

24125. Aug. 30.—Authorizing Town of Windsor, N.S., to build wooden box culvert under Dominion Atlantic Ry. where it crosses the old bed of Cunnabel Creek, culvert to have 4 by 6 ft. opening and be according to C.P.R. standard and under D.A.R. supervision.

24126 to 24130. Aug. 30, 26.—Approving Bell Telephone Co. agreements with Muskoka, Victoria and Haliburton Telephone Co., Aug. 16; Noisy River Telephone Co., Aug. 20; Mornington and Wellesley Telephone Co., Aug. 13; South Bruce Rural Telephone Co., Aug. 19; and New Dundee Rural Telephone Co., Aug. 12.

24131. Aug. 31.—Extending, for four months from date, time within which C.P.R. shall complete sidings in Bala, Ont.

24132. Aug. 28.—Approving Canadian Northern Ry. Release of Responsibility Special Contract, in connection with transportation of perishable freight in cold or stormy weather.

24133. Aug. 30.—Authorizing Kettle Valley Ry. to carry freight over its line from junction with C.P.R. near Hope, B.C., mileage 39.5 easterly to mileage 31.

24134. Sept. 2.—Authorizing C.P.R. to enter L. G. Perry's lands, s.e. ¼ Sec. 22-8-3, w. 3 m., Sask., for ploughing fireguards on each side of its right of way between mileage 15.2 and 15.6, Shaunavon Subdivision, Sask.

24135. Sept. 3.—Authorizing Canadian Northern Ry. to open for traffic its line from Laird to Carlton, 8 miles, speed of trains limited to 15 miles an hour.

24136. Sept. 1.—Authorizing Hamilton St. Ry. to operate over crossing of Toronto, Hamilton and Buffalo Ry. spur to Steel Co. of Canada's premises, Hamilton, Ont.

24137. Sept. 1.—Ordering that \$250 directed under order 24000 to be paid by York Tp., Ont., towards cost of installing bell at crossing of Eglinton Ave., be divided equally between C.P.R. and G.T.R., on account of separate bells required under amending order 24092.

24138. Sept. 1.—Extending, for 30 days from date, time for Great Northern Ry. to install bell at highway east of White Rock station, B.C.

24139. Sept. 2.—Authorizing G.T.R. to rebuild overhead farm crossing between Lots 10 and 11, Con. 1, Murray Tp., Ont.

24140. Sept. 2.—Authorizing C.P.R. to build extension of siding for McKinnon, Holmes & Co., Ascot Tp., Ont.

24141. Sept. 3.—Authorizing Canadian Northern Ry. to open for traffic its line from Tichfield to Dumblane, 8 miles; speed of trains limited to 18 miles an hour.

24142. Sept. 2.—Approving C.P.R. revised location from near Stony Creek to easterly portal of Rogers Pass Tunnel, mileage 76.44 to 80.20, Mountain Subdivision, B.C.

24143. Sept. 2.—Ordering Lake Erie and Northern Ry. to provide suitable overhead farm crossing with a 10% grade for A. and D. J. McEwen, Brantford Tp., Ont.

24144. Sept. 2.—Approving plan of C.P.R. standard pile trestle with 20 ft. clear opening.

24145. Sept. 7.—Authorizing C.P.R. to build temporary conveyor and trestle across its track at mileage 105.79, Toronto Subdivision, Ont.

24146. Sept. 7.—Authorizing Canadian Northern Ry. to open for traffic its line between Canora and Sturgis, Sask., 22 miles.

24147. Sept. 3.—Authorizing Canadian Northern Ry. and Suburban Rapid Transit Co. to operate half-interlocking plant at crossing on Portage Ave., Winnipeg, Man.

24148. Sept. 7.—Authorizing Rural Municipality Fertile Valley, no. 285, Sask., to build highway crossing over Canadian Northern Ry. Elrose Branch in n.e. ¼ Sec. 8-28-9, w. 3 m., at C.N.R. cost.

24149. Sept. 8.—Ordering G.T.R. to install, within 30 days, a derail at east end of siding at Killaloe, Ont., a light to be kept burning on derail at night to indicate its position.

24150. Sept. 8.—Ordering Toronto, Hamilton & Buffalo Ry. to re-arrange bents of timber trestle over Hamilton Radial Ry., at Sherman Inlet, Hamilton, Ont., within 60 days from date.

24151. Sept. 9.—Authorizing Canadian Northern Ry. to divert road in n.e. ¼ Sec. 9-53-16, w. 4 m.

24152. Sept. 7.—Ordering C. N. Quebec Ry. to fence west side track from mileage 23.5 to 25.2, Sarazin Siding to Deer Lake, Montfort Subdivision, and complete same by Oct. 15.

24153. Sept. 9.—Authorizing Saskatchewan

Government to build highway over Canadian Northern Ry. at south end station grounds at Richard, at C. N. R.'s cost.

24154. Sept. 7.—Approving clearances at G.T. R. siding for West, Taylor, Bickle & Co., Norwich, Ont.

24155. Sept. 8.—Authorizing C.P.R. to build extension to spur for Curtis's & Harvey Canada, Ltd., Lots 5 and 6, Rigaud Parish, Vaudreuil County, Que.

24156. Sept. 10.—Authorizing C. N. Quebec Ry. to build spur for La Compagnie des Produits Agricoles, Lac St. Jean, Que.

24157. Sept. 10.—Approving C.P.R. plans, re clearances at country elevators, in compliance with order 23935, subject to condition that side of siding farthest from elevators have clearance of at least 6 ft. from gauge side of nearest rail.

24158. Sept. 8.—Ordering Esquimalt & Nanaimo Ry., within 60 days, to install improved automatic bell at crossing Comox Road, Nanaimo, B.C.; 20% to be paid out of railway grade crossing fund.

24159. Sept. 10.—Approving proposed road diversion by G. T. Pacific Ry. in s.w. ¼ Sec. 8-21-2, w.2.m., mileage 253 west of Winnipeg, Yorkton District, Sask., subject to consent of rural municipality 183.

24160. Sept. 9.—Authorizing G.T.R. to build siding from east of Don River, Toronto, into Toronto Harbor Commissioners' premises, crossing of 150 ft. roadway to be according to standard regulations; siding to be built at expense of Toronto Harbor Commissioners, and completed within three months.

24161. Sept. 11.—Authorizing Great Northern Ry. to withdraw for present year its service on its Croville-Princeton Subdivision, B. C., required by order 23663, May 4, effective Sept. 15.

24162. Sept. 10.—Relieving Canadian Northern Ry. from providing further protection at crossing of main road between Brockville and Westport, Ont.

24163. Sept. 13.—Authorizing Great Northern Ry. to withdraw its suburban train service between Crescent and Vancouver and New Westminster, B. C., from June 15 to Oct. 15 each year, subject to condition that it stop trains 355 and 356 on flag signal at Ocean Park, Crescent, Townsend and stations between New Westminster and Vancouver.

24164. Sept. 14.—Authorizing London Railway Commission to build transfer track between London & Port Stanley Ry. and G.T.R. at St. Thomas, Ont.

24165. Sept. 13.—Authorizing C.N. Quebec Ry. to dispense with use of signal levers 1, 2, 3, 7, 11 and 12 at interlocking plant at crossing of C.P.R. east of Lorette.

24166. Sept. 13.—Relieving C.P.R. and Canadian Northern Ry. from maintaining night signalman to operate interlocking plant at Mervin Jet., Man.

24167. Sept. 13.—Relieving Canadian Northern Ry. and C.P.R. from maintaining night signalman to operate interlocking plant in lot 56, Portage la Prairie Parish, Man.

24168. Sept. 3.—Ordering G.T. Pacific Ry. to build and divert road allowance between Secs. 35 and 36-53-10, w. 5 m., across its track, crossing to be on 7% grade.

24169. Sept. 11.—Authorizing C.P.R. to build spur on s.w. ¼ Sec. 23 and n.e., n.w. and s.e. ¼ Sec. 21-14-10, e.p.m., and across allowances between Secs. 28 and 21, and Secs. 21 and 16, and across Winnipeg Electric Ry. transmission line; and rescinding order 24091, Aug. 12.

24170. Sept. 14.—Relieving G.T.R. from providing further protection at crossing at 10th line of Brooks, 5 miles west of Alvington, Ont.

24171. Sept. 11.—Authorizing Dixville Municipality, Que., to build crossing over G.T.R., ½ mile west of Dixville station.

24172. Sept. 15.—Extending to Oct. 4, time within which Great Northern Ry. shall fence portion of right of way, mileage 187 to 188; also entire right of way, mileage 185.2 to 188.75; and 189.50 to 191.45.

24173. Sept. 15.—Relieving Canadian Northern Ry. from providing further protection at highway one mile south of Clarkeigh, Man.

24174. Sept. 11.—Extending for 60 days from date time within which clearances between G.T.R. railway and telegraph poles carrying Great North Western Telegraph Co.'s wires and railway wires between Guy St. and St. Henri station, Montreal, were authorized.

24175. Sept. 15.—Extending to Dec. 31, time within which C.P.R. shall complete extension to siding for Cataract Jct. Sand & Gravel Co., Lot 14, Con. 3, west of Hurontario St.

24176. Sept. 14.—Authorizing residents of Mont Laurier, Que., to build highway over C.P.R. at Ouellette St.; and dismissing application for crossings at Lafontaine and Des Belges St.

24177. Sept. 16.—Authorizing C.P.R. to build spur for Western Terminal Elevator Co., West Fort William, Ont., and approving clearance there.

24178. Sept. 15.—Extending to Oct. 15, time within which C.P.R. shall install bell at crossing at Ketepec station, N.B.  
 24179. Sept. 13.—Authorizing Canadian Northern Ry. to open for traffic its line between Inwood and Hodgson, Man., 50 miles, and rescinding order 23001, Dec. 14, 1914.  
 24180. Sept. 16.—Authorizing Canadian Northern Ry. to open for traffic its North Battleford Northwesterly line from Edam to Turtleford, Sask., mileage 38 to 57, speed of trains limited to 18 miles an hour.  
 24181. Sept. 16.—Authorizing C.P.R. to cross at grade, Walnut St., Galt, Ont.  
 24182. Sept. 16.—Authorizing City of Merritt, B.C., to build highway crossing where Main St. crosses C.P.R.  
 24183. Sept. 16.—Extending for six months from date, time within which C.N. Quebec Ry. shall complete siding across Stadacona and Marlborough Sts., Montreal.  
 24184. Sept. 17.—Authorizing Canadian Northern Ry. to open for traffic its line from Wroxton Jct. to Yorkton, mileage 0 to 25.2.  
 24185. Sept. 16.—Authorizing C.P.R. to enter upon land, ¼ Sec. 31-8-4, e.p.m., Man., mileage 14, Emerson Subdivision, fireguards to be built in accordance with Fire Guard Regulations, May 3.  
 24186. Sept. 17.—Ordering G.T. Pacific Ry., as provided by Sec. 254 of Railway Act., to erect fence on north side right of way on Lot 35, Tp. 47, r. 13, w. 4 m., to be completed within

60 days from date.  
 24187. Sept. 17.—Amending order 24087, Aug. 14, re location of Toronto Terminals Co.'s railway between York St. and Don River, Toronto.  
 24188. Sept. 18.—Approving proposed Supplement No. 5 to Canadian Freight Classification 16, as amended, revised and resubmitted by Canadian Freight Association, Sept. 14, to become effective not later than Nov. 1, with exception of item giving specifications for cheese boxes, which is to become effective not later than Dec. 1.  
 24189. Sept. 17.—Ordering Halifax & Southwestern Ry. to fence right of way from Chain Lake to Bayers Lake, 1 mile, to be completed within two weeks from date.  
 24190. Sept. 15.—Extending to May 30, 1916, time within which Canadian Northern Ry. may carry traffic temporarily, over its Oakland Branch from mileage 42 to end of track, 12 miles, speed of trains limited to 12 miles an hour.  
 General order 148. Sept. 1.—Authorizing all railway companies within legislative control of Parliament of Canada and operating in Alberta and Saskatchewan, to endorse upon bills of lading, approved under order 7562, amount of advances for seed grain, fodder for animals, and other goods furnished to persons in those provinces, and interest agreed to be paid, authorized by Chap. 20 of 1915, and as provided under order in council of July 23, 1915.

**Canadian Northern Railway Construction, Betterments. Etc.**

Sir William Mackenzie arrived in Ottawa, Sept. 7, after having made a trip over the Canadian Northern Ry. lines, starting at Toronto and travelling v.a Capreol, Port Arthur, Winnipeg, and Edmonton to Port Mann, B.C., and thence to Vancouver, and on his return going over to the eastern section of the main line between Capreol and Ottawa. The trip occupied over two weeks, and was made in a special train. During its course the newly completed lines between Ruel and Port Arthur, from near the Yellowhead Pass to Port Mann, and the Capreol-Ottawa section, were given special attention, as they are to be put into immediate operation. A freight service on the through line from Toronto to the Pacific Coast is expected to be started in October and a passenger service in November.

The line will only be operated to New Westminster for the present, but will be extended to Vancouver as soon as the terminal work at False Creek has been completed. In the meantime the Great Northern Ry. tracks will be used between New Westminster and Vancouver. In an interview at Vancouver, Aug. 28, Sir William Mackenzie is reported to have said that the company has the necessary funds, and is prepared to go ahead with the terminal project. While certain work has been in progress on the False Creek flats, which are being reclaimed for terminal purposes by the Canadian Northern as well as by the Great Northern Ry. (U. S.), there have arisen certain difficulties respecting which negotiations were in progress which were brought to a definite conclusion during the President's visit. That this is the case appears evident from statements made at a meeting of the city's Bridge and Railway Committee, Sept. 2. The chairman of the committee announced that tenders for the construction of the seawall section of the False Creek reclamation plans would be called for by the end of the month, and said the plans were in the hands of the City Engineer for approval. The cost of the work is estimated at \$115,000, and it is expected to be completed within five months. This work is in addition to that now in progress at the head of the creek. About 2,000,000 cubic yards of filling are reported to have been put in there up to Aug. 31. The erection of the station, which is to be built 250 ft. east of the east line of Main St., on the line between the Canadian Northern and the Great Northern Ry. sections of the site, is, it is said, to be completed by Mar., 1918. The total cost

of the projected terminal work at Vancouver is estimated at \$5,000,000.

Referring, in the Vancouver interview to the construction of the Vancouver Island line, Sir William Mackenzie is reported to have said the Patricia Bay line will be rushed to a completion, and that a ferry service to the mainland will be put in operation as soon as possible after the inauguration of regular traffic on the line to New Westminster. D. O. Lewis, Division Engineer, on his return to Victoria, after having met Sir William at Vancouver, is reported to have said that track laying would be started at once on the lines on Vancouver Island, and would be gone on with as far as the stock of rails available would carry it.

The Board of Railway Commissioners has authorized the opening for traffic of the following extensions of lines:—From Laird to Carleton, 8 miles, an extension of the branch from Dalmeny in the direction of Prince Albert, Sask.; from Tichfield to Dumblane, 8 miles, an extension of a branch of the line from Saskatoon to Elrose, Sask.; and from Canora to Sturgis, Sask., 22 miles, a line connecting the main line to Saskatoon with the Thunderhill branch.

On branch line work, press reports state that track laying is being gone on with on the extension of the Thunderhill Branch for about 25 miles from Preeceville, Sask.; and on the extension of the Camrose line southeasterly towards Battle River. It is also reported that contracts have been let for building two 200 ton automatic locomotive coaling plants at Kindersley, Sask., and Big Valley, Alberta. (Sept., pg. 348.)

**Canadian Local Freight Agents' Association.**—A branch of this association for Fort William and Port Arthur, Ont., was organized at a meeting held at Fort William, Sept. 9, when the following officers were elected:—President, G. H. Drowley, Canadian Northern Ry., Port Arthur; Vice President, C. E. Legg, C. P. R., Fort William; Secretary-Treasurer, M. Travers, C. P. R., Fort William.

**Steam Railway Electrification in England.** The section of the Lancashire and Yorkshire Ry. between Manchester and Bury, which is being electrified, will, it is expected, be ready for operation during November. The third rail system has been adopted, the same as is used on the line between Liverpool and Southport, which has been in operation several years. Corridor cars will be adopted.

**Canadian Northern Railway Earnings, Etc.**

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

	Gross Earnings	Expenses	Net Earnings	Increase or Decrease
July	\$1,206,100	\$921,000	\$285,100	x\$145,400
Aug.	1,192,800	954,000	238,800	x5,900
	\$2,398,900	\$1,875,000	\$523,900	\$151,300
Decr.	\$ 563,100	\$ 411,800	\$151,300	.....

x Decrease.  
 Mileage in operation at Aug. 31, 4,965, against 4,670 at same period 1914.

Approximate earnings for three weeks ended Sept. 21, \$1,182,400, against \$1,345,400 for same period 1914.

**Canadian Pacific Railway Earnings, Etc.**

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

	Gross Earnings	Expenses	Net Earnings	Increase or Decrease
July	\$7,895,375.47	\$5,094,972.35	\$2,800,403.12	x\$978,042.71
Dec.	\$7,895,375.47	\$5,094,972.35	\$2,800,403.12	x\$978,042.71
Dec.	\$2,586,596.25	\$1,608,563.54	\$ 978,042.71	.....

xDecrease.  
 Approximate earnings for August, \$7,914,000, against \$9,532,000 for Aug., 1914, and for three weeks ended Sept. 21, \$6,624,000, against \$7,184,000 for same period 1914.

**Grand Trunk Railway Earnings, Etc.**

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

Grand Trunk Railway.		
Earnings	.....	\$3,612,900
Expenses	.....	2,507,500
Net earnings	.....	\$1,105,400
Grand Trunk Western Railway.		
Earnings	.....	\$635,950
Expenses	.....	512,500
Net earnings	.....	\$123,450
Detroit, Grand Haven and Milwaukee Ry.		
Earnings	.....	\$249,100
Expenses	.....	188,400
Net earnings	.....	\$60,700

Approximate earnings for August, \$4,585,881, against \$4,853,740 for Aug., 1914, and for three weeks ended Sept. 21, \$3,188,108, against \$3,267,866 for same period 1914.

**TRAFFIC RECEIPTS OF THE SYSTEM.**

Aggregate from Jan. 1 to Aug. 31:—				
	1915	1914	Incr.	Decr.
G.T.R.....	\$25,771,392	\$28,188,120	.....	\$2,416,728
G.T.W.R.....	4,788,364	4,746,721	\$41,643	.....
D.G.H.&M.R.....	1,720,902	1,630,206	90,696	.....
Totals.....	\$32,280,658	\$38,565,137	.....	2,284,479

**Grand Trunk Pacific Railway Earnings.**

The approximate earnings of the Prairie Section, 916 miles, for August were \$259,581, against \$363,074 for Aug., 1914. Aggregate earnings for two months ended Aug. 31, \$481,088, against \$707,061 for same period 1914.

**Songhees Indian Reserve, Victoria, B. C.**—

The British Columbia Department of Public Works is laying out the portion of the Songhees Indian Reserve, Victoria, received by it on the partition with the railway companies. The plans include the building of a retaining wall along the waterfront, and the reclamation of an extensive area behind it, the construction of a public road across it extending from high level at the proposed Johnson St. terminal to a subway at the wharf level, and a railway track to be used jointly by the Esquimalt and Nanaimo Ry. (C. P. R.) and the Canadian Northern Pacific Ry. After the reserve is laid out it is proposed to complete the scheme by the erection of two freight docks, a coal dock and a ferry slip, as required by the development of the area reserved for industrial plants. H. A. Icke is resident engineer in charge of the work.

## Traffic Orders by the Board of Railway Commissioners.

### Endorsement of Bills of Lading re Advances For Seed Grain, Etc.

General order 148, Sept. 1, re the collection of advances for seed grain, fodder for animals and other goods by way of relief, furnished to persons in Alberta and Saskatchewan, under the authority of the Statutes of 1915, chap. 20, and the Board's order 7562, July 15, 1909, approving forms of bill of lading for use by railway companies, and setting forth conditions and limitations to be endorsed upon them. Upon the request of the Governor General in Council that railway companies be instructed to endorse upon the bills of lading under which shipments of grain are made in Alberta and Saskatchewan, the amount payable for advances for seed grain, fodder for animals and other goods, as authorized under said Statutes of 1915, chap. 20, and the interest agreed to be paid, and reading what has been filed on behalf of the Canadian Pacific, Canadian Northern and Grand Trunk Pacific Railway Companies: It is ordered that in pursuance of the powers conferred upon the Board under the Railway Act, sec. 340, and all other powers possessed by it in that behalf, all railway companies within the legislative control of the Parliament of Canada and operating in Alberta and Saskatchewan, are authorized to endorse upon the bills of lading, approved under order 7562, the amount of advances for seed grain, fodder for animals and other goods furnished to persons in Alberta and Saskatchewan, and the interest agreed to be paid, authorized by said chap. 20 of the Acts of 1915, and as provided under Order in Council of July 23, 1915.

### Fredericton Freight and Passenger Rates.

24001. July 27. Re application of the Board of Trade of Fredericton, N. B., for an order remedying arbitrary and discriminatory rates on both freight and passenger traffic to and from Fredericton, on the Canadian Pacific and Intercolonial Railways; and the application of the C. P. R. Co. for a rehearing of the matter: Upon hearing the application of the Board of Trade of Fredericton at St. John, N. B., May 14, 1914; and upon consideration of the general principles involved as developed at the hearing of the application of the C. P. R. Co. at Ottawa, Nov. 17, 1914, and what was alleged; and upon its appearing that the matter has been standing for submissions from the Board of Trade of Fredericton, and that none have been received; it is ordered that the application of the Board of Trade of Fredericton be refused.

### Class Rates, Winnipeg to Two Creeks.

24040. Aug. 3. Re complaint of Two Creeks Grain Growers' Association alleging unjust discrimination in freight rates as between Winnipeg and Elkhorn, and Winnipeg and Two Creeks, Man., on the C. P. R., to the prejudice of Two Creeks: It is ordered that the C. P. R. be directed forthwith to amend its distributing tariff from Winnipeg, St. Boniface, Paddington and North Transcona, so as to apply the same rates to Two Creeks, as to Elkhorn.

Commissioner McLean gave the following judgment:—Elkhorn, which is on the C. P. R. main line, 198 miles west of Winnipeg, had a 1st class rate of 54c, the other classes being appropriately scaled. Two Creeks, 194 miles west of Winnipeg, has a 1st class rate of 57c. Complaint is made of the difference as being discriminatory. On the movement west from Winnipeg to the two points in question, the mileage is common to Virден: Elkhorn is 16.8 miles west of

Virден, on the main line. Two Creeks is 13.4 miles north-westerly from Virден, on the line extending from Virден to McAuley. Both Two Creeks and Elkhorn fall within the mileage grouping from 190 to 200 miles, inclusive, of the standard freight mileage tariff, and therefore are prima facie entitled to the same rate on the mileage scale. Two Creeks was first opened to traffic in March, 1910. The history of the arrangements whereby the so-called Manitoba Scale was worked out has been set out in the judgment of the Board in the Western Rates Case. In substance, the standard mileage rate applicable in Manitoba was arrived at by deducting 15% from a hitherto existing uniform scale applicable generally in the prairie provinces. The distributing, or "town" tariff, rates were arrived at by a further deduction of 15%. The standard 1st class rate for the Two Creeks distance was 68 cents, and the "town" tariff rate was 57c. Adding to this the charge for Winnipeg cartage, viz. 3c., the 1st class rate would be 60c. This was the rate charged to and from Two Creeks. The Elkhorn 1st class rate at the same time was 57c. In May, 1912, the railway company abolished its cartage service at Winnipeg, reducing the 1st class rates by 3c in each case. This made the Elkhorn 1st class rate 54c and the Two Creeks 1st class rate 57c.

The railway company in its answer alleges that the rate to Elkhorn as established prior to Sept. 1, 1914, had been erroneous, and that it should properly have been 57c. The railway company stated, further, that as it was understood that under the Board's Order in the Western Rates Case, no rates were to be raised, the old rate of 54c from Winnipeg to Elkhorn was continued, although it was out of line. Miniota, the terminus of the branch line system from Chater, is 196.8 miles from Winnipeg and falls in the same mileage group as Elkhorn and Two Creeks. It is in the same territory as Two Creeks, being about eight miles due north of it. It has a rate of 54c which, standing by itself, might appear to be controlled by the fact that the Grand Trunk Pacific has the short distance, viz. 180 miles, the appropriate rate for which is 54c. However, the C. P. R. operated to Miniota before the Grand Trunk Pacific was in operation. The original rate to Miniota was 57c, 1st class. By deduction of the cartage charge, the present rate of 54c was arrived at. Winnipeg to Virден, 180.5 miles, falls within the group of the standard mileage, covering from 180 to 190 miles. The distributing rate appropriate to this is 54c. Harmsworth, which is 8.7 miles west of Virден, on the Virден-McAuley Branch, falls within the same group as Virден, and is given the 54c rate.

It is alleged that the difference in rate as between Elkhorn and Two Creeks does not create a discriminatory situation. It is stated that the two points have nothing in common; that the tonnage in and out of Two Creeks is insignificant; that Two Creeks is situated on a branch line, while, on the other hand, Elkhorn is on the main line, where the cost of operating is lower and the density of tonnage and population much greater. While reference has been made to the difference in the density of traffic as between the main line and the branch line, the pertinency of this is not apparent when it is considered that what is involved is a general mileage scale. As has been indicated, the 54c rate is also given to Elkhorn; but, while Virден and Harmsworth, falling within the same mileage group, are given the same rate, and while Elkhorn and

Miniota have the same rate, Elkhorn and Two Creeks, falling within the same mileage group, are given different rates, as has been indicated. This is a discriminatory treatment, which has not been justified, and Two Creeks should be given the same rate as is given to Elkhorn.

### Interchange of L. C. L. Traffic at Lyn, Ont.

24039. Aug. 3. Re complaint of J. N. Knowlton, Jr., of Newboro, Ont., that the Canadian Northern Ry. refuses to accept from the Grand Trunk Ry. at Lyn, Ont., certain goods consisting of a sewing machine and box of settlers' effects consigned to him from Black Rock, N. Y., on June 29, 1915: Upon its appearing that Lyn is shown in the Official Stations Lists of the Grand Trunk and Canadian Northern Railway Companies, C.R.C. nos. E.2368 and E.227, respectively, as a point of transfer, by track connection, for freight in less than carload lots, as well as in carloads between the said companies' railways, and that freight in less than carload lots has accumulated at Lyn because of the refusal of the Canadian Northern to receive other than carload shipments from the Grand Trunk over the said track connection; It is ordered that the Canadian Northern forthwith accept the said less-than-carload freight from the Grand Trunk over the track connection between the railways of the two companies at Lyn, and forward it to its destinations without further delay.

### Interchange Facilities at Calgary.

24079. Aug. 13. Re application of City of Calgary, Alta., for the construction of interchange tracks between the Grand Trunk Pacific and Canadian Pacific Railways there: Upon hearing the application at Calgary on Nov. 26, 1914, and a subsequent sitting at Calgary on June 9, 1915, and it appearing that the Department of Trade and Commerce, in order to secure access for the Grand Trunk Pacific Ry. to the elevator at Calgary of the Board of Grain Commissioners for Canada, is willing to contribute \$14,000 toward the construction of the interchange tracks—It is ordered that the Grand Trunk Pacific Ry. forthwith proceed with the construction of interchange tracks between its railway and the C. P. R., at the location known as 'the Globe Elevator site,' in accordance with plans to be submitted by the railway company to the Board for approval, upon the following conditions: The Department of Trade and Commerce will pay to the Grand Trunk Pacific Ry. \$14,000 towards the cost of the construction of the interchange tracks. The construction of the interchange tracks is to be carried on under the supervision and to the satisfaction of an engineer of the Board.

### Pulpwood Rates to Mechanicville, N. Y.

24102. Re complaint of Auger & Son and the d'Auteuil Lumber Co., of the City of Quebec, against Supplement 1 to the C. P. R. Tariff, C.R.C. no. E.2847, increasing rates on pulpwood to Mechanicville, N. Y., via Boston & Maine Rd.: It is ordered that Supplement 1 to C. P. R. Joint Freight Tariff, C.R.C. no. E.2847, and Supplement 16 to Grand Trunk Ry. Joint Freight Tariff, C.R.C. no. 2588, providing increased rates on pulpwood to Mechanicville, via Boston & Maine Railroad, be allowed: the said supplements to become effective not earlier than Nov. 1, 1915; and that order 23020, Dec. 22, 1914, suspending the said supplements, be rescinded.

### Interswitching to Cobourg Town Dock.

24104. Re application of Town of Cobourg, Ont., for an order directing the Grand Trunk Ry. to grant access to the harbor or dock located on the town esplanade, owned by the corporation, and connecting

with the G. T. R. main line: It is ordered that the G. T. R. be directed to switch cars in its service, and to interswitch cars in the service of any other railway company with whose railway it has, or may have, a connection at Cobourg, to and from the track on the esplanade alleged to be owned by the Town of Cobourg, when desired to do so by the Mayor or Clerk of the Municipality, in writing, in general terms, or in specific cases, upon condition that the G. T. R. shall not be responsible for the collection from consignees of freight charges nor for damages to cars, nor for damage to or loss of contents while on the said siding, unless caused by or resulting from the negligence of the G. T. R., its servants or agents. Order 21976, June 12, 1914, is rescinded.

**Release Form for Carriage of Freight in Cold or Stormy Weather.**

24132. Aug. 28. Re application of the Canadian Northern Ry. for approval of Release of Responsibility Special Contract in connection with transportation of perishable freight in cold or stormy weather. It is ordered that the said Special Contract be approved.

**Supplement to Canadian Freight Classification.**

24188. Re application of Canadian Freight Association, on behalf of the railway companies subject to the Board's jurisdiction under section 321 of the Railway Act, for an order approving the proposed Supplement 5 to Canadian Freight Classification 16, containing certain increased, reduced, and additional ratings: Notice of the proposed increased ratings having been given in The Canada Gazette, as required by sec. 321 of the Railway Act, and the Board having invited consideration thereof by the Canadian Manufacturers' Association, the Montreal Chamber of Commerce, the Ontario Wholesale Grocers' Guild, and the Boards of Trade of Halifax, St. John, Quebec, Montreal, Ottawa, Toronto, Hamilton, Brantford, London, Winnipeg, Brandon, Regina, Saskatoon, Calgary, Edmonton, Vancouver, and Victoria; upon the consideration of what has been filed; and upon the recommendation of the Chief Traffic Officer of the Board—It is ordered that the said proposed supplement, as amended and revised and resubmitted for approval by the Chairman of the Canadian Freight Association, by letter dated at Montreal, Sept. 14, 1915, be approved, to become effective not later than Nov. 1, 1915, with the exception of the item on page 9 giving specifications for cheese boxes, which is to become effective not later than Dec. 1, 1915.

**Canadian Northern Standard Mileage Tariff.**

24200. Sept. 20. Re application of Canadian Northern Ry., under sec. 327 of the Railway Act, for approval of its Standard Freight Mileage Tariff C.R.C. no. W-862, cancelling C.R.C. no. W-793. It is ordered that the said tariff be approved.

**Fish Traffic in Western Canada.**—Since the opening of the Grand Trunk Pacific Ry. to Prince Rupert, B. C., there has been a large development in the fishing industry at that point, and considerable shipments are being made to Chicago and the middle west. By the opening of the Edmonton, Dunvegan and British Columbia Ry. northward from the G. T. P. R. main line, the fishing in Lesser Slave Lake has been made accessible. Two companies have been formed to deal with the business, and the Canadian Express Co. has been called on to supply special refrigerator cars to carry fish to Edmonton and thence to Winnipeg by G. T. P. R., and on by connecting lines to Chicago.

**Railway, Finance Meetings, Etc.**

**Algoma Central and Hudson Bay Ry.** The bondholders' committee has issued a circular stating, as a result of its recent enquiries, that while it is unable to recommend that any action be taken at present against the Lake Superior Corporation, it feels bound to criticise the financial arrangements which were made, under which the Corporation guaranteed the bonds of the railway company, the terminal company and the Algoma Steel Corporation, and other concerns. The guarantee was entirely dependent for any value upon the success of the various subsidiaries whose bonds were guaranteed. Some important negotiations are pending, and as the committee desires to strengthen its hands, it has requested bondholders to deposit their bonds with the Bank of Montreal.

**Klondike Mines Ry.** Following are the officers and directors for the current year, elected at the recent annual meeting,—President, H. B. McGiverin; Vice President, J. P. Ebbs; Secretary, A. Haydon; other directors,—John Latta and C. G. Kekewich.

**White Pass and Yukon Route.** Gross earnings from Jan. 1 to July 31, \$739,582 against \$804,498 for same period 1914.

**Lachine, Jacques Cartier and Maisonneuve Ry.**—The annual meeting was held at Montreal, Sept. 7. Following are the directors for the current year:—President, E. J. Chamberlin; Vice President, R. S. Logan; Secretary-Treasurer, Frank Scott; other directors, H. G. Kelley, J. E. Dalrymple, W. H. Biggar, K. C., and Hugh Paton.

**Shuswap and Okanagan Ry.**—Canadian Pacific Ry.—Application is being made to

the Board of Railway Commissioners for a recommendation to the Governor General in Council to sanction the leasing of the Shuswap and Okanagan Ry. to the C. P. R. for 999 years from July 1, 1913. The S. and O. R. extends from Sicamous Jct., on the C. P. R., to Okanagan Landing, on Okanagan Lake, B. C., 50.8 miles. The line was built under a British Columbia charter granted in 1886, and was finally opened for traffic in 1893 by the C. P. R., under a lease for 25 years. The British Columbia Legislature authorized the issue of \$1,249,760 of 4% bonds upon which there was a provincial guarantee of interest for 25 years from 1890, receiving in return 40% of the gross receipts.

**Thousand Islands Ry.**—The Annual meeting was held at Deseronto, Ont., Sept. 13. Following are the directors for the current year: President, E. W. Rathbun, Deseronto, Ont.; Secretary-Treasurer, J. H. Valleau, Gananoque, Ont.; Manager, H. W. Cooper, Gananoque, Ont.; other directors, C. S. Lee and B. R. Hepburn.

**Toronto Terminal Ry. Co.**—The annual meeting was held at Montreal, Sept. 14. The officers and directors for the current year are,—President, H. G. Kelley; Vice President, George Bury; other directors, Sir Thomas G. Shaughnessy, E. J. Chamberlin, I. G. Ogden, J. E. Dalrymple; Secretary, H. Phillips; Treasurer, H. E. Suckling; General Manager, J. W. Leonard; Auditor, W. H. Ardley; General Solicitor, W. C. Chisholm; Chief Engineer, J. R. W. Ambrose.

**Franklin Railway Supply Co., New York,** has opened an office in the Transportation Building, Montreal, in charge of J. S. Coffin, Jr., as Canadian Sales Manager.

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

Week ending Sept. 10, 1915.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Flax, bushels.	Totals, bushels.
<b>Port William:—</b>					
C.P.R. ....	215,495	8,564	20,501	2,589	247,149
Consolidated Elevator Co. ....	76,312	10,561	10,553	70,519	167,945
Empire Elevator Co. ....	233,390	13,195	24,676	119,941	391,202
Ogilvie Flour Mills Co. ....	199,917	11,870	7,824	.....	219,611
Western Terminal Elevator Co. ....	46,885	.....	.....	223,179	270,064
G.T. Pacific ....	66,706	2,187	5,868	102,271	177,032
Grain Growers' Grain Co. ....	187,955	11,193	14,313	.....	213,461
Port William Elevator Co. ....	36,614	11,832	3,032	142,122	193,660
Eastern Terminal Elevator Co. ....	13,672	2,092	10,999	.....	26,763
<b>Port Arthur:—</b>					
Port Arthur Elevator Co. ....	738,649	20,714	102,254	241,425	1,103,042
D. Horn & Co. ....	2,074	.....	.....	38,122	40,196
Dominion Government Elevator ..	117,850	14,964	9,001	73,696	215,511
Grain afloat ..	.....	.....	.....	.....	.....
<b>Total Terminal Elevators .....</b>	<b>1,935,519</b>	<b>107,172</b>	<b>209,081</b>	<b>1,013,864</b>	<b>3,265,636</b>
<b>Saskatoon Dominion Government Elevator .....</b>	<b>.....</b>	<b>.....</b>	<b>.....</b>	<b>.....</b>	<b>.....</b>
<b>Moosejaw Dominion Government Elevator .....</b>	<b>18,791</b>	<b>133</b>	<b>344</b>	<b>612</b>	<b>19,880</b>
<b>Total Interior Terminal Elevators .....</b>	<b>18,791</b>	<b>133</b>	<b>344</b>	<b>612</b>	<b>19,880</b>
<b>Depot Harbor .....</b>	<b>.....</b>	<b>42,250</b>	<b>.....</b>	<b>.....</b>	<b>42,250</b>
<b>Midland:—</b>					
Aberdeen Elevator Co. ....	.....	1,659	.....	.....	1,659
Midland Elevator Co. ....	.....	.....	.....	.....	.....
Tiffin, G.T.P. ....	.....	.....	.....	.....	.....
Port McNicol .....	21,842	102,335	14,166	.....	138,343
Collingwood .....	41	.....	.....	*494	535
Goderich .....	6,907	.....	.....	.....	6,907
<b>Kingston:—</b>					
Montreal Transportation Co. ....	.....	.....	.....	.....	.....
Commercial Elevator Co. ....	.....	27,010	.....	.....	27,010
Port Colborne .....	13,616	24,957	.....	8,920	47,493
Prescott .....	.....	.....	.....	.....	.....
<b>Montreal:—</b>					
Harbor Commissioners No. 1 .....	.....	.....	9,031	.....	9,031
Harbor Commissioners No. 2 .....	901,238	150,938	2,437	24,993	1,079,606
Montreal Warehousing Co. ....	1,155	22,860	.....	40,578	64,593
Quebec Harbor Commissioners .....	3,509	9,885	.....	.....	13,394
West St. John, N.B. ....	.....	.....	.....	.....	.....
Halifax, N.S. ....	.....	.....	.....	.....	.....
<b>Total Public Elevators .....</b>	<b>948,308</b>	<b>381,894</b>	<b>25,634</b>	<b>74,491</b>	<b>1,430,821</b>
<b>Total quantity in store .....</b>	<b>2,902,618</b>	<b>489,199</b>	<b>235,059</b>	<b>1,088,967</b>	<b>4,716,337</b>
*Corn.				*494	

### Railway Rolling Stock Notes.

The Canadian Northern Ry. has received 15 steel underframe baggage cars from National Steel Car Co.

The Intercolonial Ry. has received 300 of the 650 box cars, which were ordered recently from Canadian Car and Foundry Co.

Canadian Locomotive Co., Ltd., Kingston, Ont., is building 16 Canadian Baldwin electric trucks for the Lake Erie and Western Ry. for standard gauge suburban electric cars.

### Steel Frame Box Cars for Canadian Government Railways.

The 350 forty ton box cars which are being built for Canadian Government Railways by the National Steel Car Co., Hamilton, Ont., are of steel frame type from drawings submitted by the Superintendent Rolling Stock, G. R. Joughins. Following are the general dimensions:

Height from rail to top of brake mast	13 ft. 10 ins.
Height from rail to top of eaves	12 ft. 7 $\frac{3}{4}$ ins.
Width over eaves	9 ft. 3 $\frac{1}{2}$ ins.
Length inside	36 ft. 0 ins.
Width inside	8 ft. 6 $\frac{1}{2}$ ins.
Length between pulling face of couplers	39 ft. 11 $\frac{1}{4}$ ins.

To resist the shocks and injury to end sheathing, 2 $\frac{3}{4}$  in. oak blocking extending 3 ft. from floor is bolted through end sheathing to centre and corner posts. Over the side door track is placed a hood 11 $\frac{1}{2}$  ft. long, no. 14 gauge, thus ensuring weather proof conditions and the easier working of door. To further assist in making the car weatherproof, the side plate filler on Z-bar side plate besides fitting snugly between T carline has a continuous bearing surface between end of carline connection and edge of Z bar side plate. Side doors are 5 ft. 4 ins. long. At one end of car 16 $\frac{1}{2}$  ins. from floor is a 10 x 10 in. rail door opening with a steel sliding door inside of car. A cast steel pocket is placed in the rail door opening and bolted to car. On same end of car a grain door opening 14 x 24 and 19 $\frac{1}{2}$  in. from bottom of end plate is covered on outside of car by a steel sliding door and on inside of car by a swinging door of pressed steel. The roof is the all metal inside type resting on T shape carlines. Ladder rounds are riveted to stiles which can easily be detached from car in case of repairs. The pressed shape running board splice is designed by the builders. Couplers are the top operating type operated by uncoupling device.

The centre sills consist of two 15 in. 23-lb. channels spaced 12 $\frac{3}{8}$  in. back to back with a 19 $\frac{1}{2}$  in. cover plate at bolster. At ends of centre sill is riveted a pressed shape sub draft sill designed to take twin spring draft gears, and stiffened with a 3 x  $\frac{3}{8}$  in. angle between sub draft sill and centre sill. The side sills are 8 in. 11.25 lb. channels connected to end sills by gussets. The end sills consist of 10 in. 15 lb. channels with a 12 in. cover plate which is riveted to centre and side sills. Between bolster and end sill is a 5 x 3 $\frac{1}{2}$  x  $\frac{3}{8}$  in. diagonal brace riveted to pressed shaped gussets: The bolster and cross bearer diaphragms are pressed shapes and the bridging of 4 in. 8.2 lb. Z-bars. Between the centre and side sills is a 3 in. 6.7 lb. Z-bar, the length of car, to which the floor is bolted. Nuts are secured by nut locks. The side framing consists of 3 in. Z-bars riveted directly to side sill and to side plate by means of pressed shaped connections. The side plate is a 4 1-16 in. 10.3 lb. Z-bar

and the end plate of a pressed Z-shape plate. The end framing consists of two 4 in. 8.2 lb. Z-bars and two intermediate posts of 3 in. 6.7 lb. Z-bars. The end framing together with the end blocking ensures a thoroughly strong end and is capable of resisting the shocks and injuries due to movements of material in the car.

Westinghouse air brakes are used complete with centrifugal dirt collector, and J. M. piston expander rings. The trucks are of the arch bar type with bolsters fitted with roller attachments and side bearings, and cast steel centre plate. Trucks are equipped with the McCord malleable iron journal boxes with improved McCord lid. The brake beam is hung from brackets cast integral with cast steel columns. The malleable brake heads are fitted with safety keys. Brake shoes are steel back.

### The Obsolete Gross Ton.

E. J. McVeigh, General Storekeeper, Grand Trunk Ry., writes Canadian Railway and Marine World: "When is a ton not a ton? Answer—When it is a gross ton. But why a gross ton? Who, away back in the dark ages started the thing anyway? And why in the name of common sense, meaning something very uncommon, should we as, presumably intelligent people continue to use it? Is it convenient? No. Does it get us anything beyond confusion and trouble? No. Then why, and again why? If we would only stop to think for a moment, which few of us do, would we go on following a useless, and worse than useless custom or habit? Try the thing yourself. Figure out 987,468 lbs. at \$14.60 a gross ton. Then figure it at the net ton. And then think of all the poor clerks in Canada and the United States, who are using the gross tons, and making mistakes. Then ask yourself, why the gross ton? Surely it is a dead one, long dead, so pitch in and help to bury it."

### Miscellaneous Electric Railway Matters.

**Running Board on the Toronto Ry. Cars.** The charge against the Toronto Ry. Co. for criminal negligence in operating cars with an outside running board, was heard at the Toronto Police Court, Sept. 2, when formal evidence only was taken and the case sent for trial to a higher court.

**The Sandwich, Windsor & Amherstburg Ry.** is running a special night service to and from the Michigan Central Rd. station at Windsor, Ont. A car leaves Ouellette Ave. and Sandwich St. at 12 midnight to connect with C. P. R. train 19. A car leaves the same point at 1.30 a. m. to connect with C. P. R. train 20 and to return to starting point if there are passengers on that train for Windsor.

**Proposed Commission for Three Border Towns.**—A Windsor, Ont., press dispatch says that at a meeting there representatives of the municipal councils of Windsor, Walkerville and Sandwich adopted a resolution in favor of asking the Ontario Government to enact legislation for the formation of a metropolitan commission to deal with all street railway questions and to take charge of the waterworks, sewers and Hydro-electric system of each of the border municipalities.

**Children's Fares on Ottawa Electric Ry.**—The Ottawa Electric Ry. has notified the public that all children under 10 years of age, excepting only infants in arms, will be charged a 3c. fare. The practice has hitherto been to let children up to 5

years, in company with parents or guardians, travel free, and to charge half fare for those between 5 and 12 years. The abuse of this by parents and those in charge of children has led the company to give notice that it will charge 3c. in cash according to the published tariff for children under 10. This will not affect the school children's rate, which is 20 tickets for 50 cents, good only during school hours.

### Miscellaneous Marine Matters.

A press report from Vancouver states that an attempt is to be made shortly, to salvage the C.P.R. Islander, which sank in the Lynn Canal nearly 14 years ago. Previous attempts have been made in this connection, and it is said that the safe on board contains several thousand dollars worth of gold dust. A new diving apparatus is to be tried on the work. The vessel is said to be lying in 320 ft. of water, but its exact location has not been arrived at.

**The Donald Steamship Co. Ltd.** has been incorporated under the Dominion Companies Act, with \$500,000 capital and office at Montreal, to carry on business as steamship owners, agents, brokers, etc., and to own and operate steam and other vessels, wharves, docks, piers and other shipping facilities. The incorporators are, R. T. Heneker, K. C., H. N. Chauvin, G. A. Coughlin, H. Wylie and C. A. Shannon, Montreal.

**The International Mercantile Marine Co.'s** plan for reorganization has been declared operative by the reorganization committee, and in making this announcement the committee states that the continued large earnings of the properties indicate that the assured cash resources of the company made it unnecessary for the stockholders to subscribe to the bonds of the new company at \$2.50 a share. Stockholders were allowed to deposit their securities without payment of this subscription, and those who had already paid, could obtain a refund up to Oct. 1, which date was set as the limit for the deposit of stock, trust certificates and bonds under the new arrangement.

**Panama Canal Traffic.** In the first fiscal year of operation, ended June 30, but embracing only 10 $\frac{1}{2}$  months, from Aug. 14, 1914, to June 30, 1915, the canal was used by 1088 vessels, and 4,969,762 tons of cargo were moved. At this rate the movement would be 5,679,762 tons in a full calendar year, 473,313.4 tons a month or 15,530.6 tons a day. The movement was 2,125,735 tons eastbound and 2,844,057 westbound. The heaviest month was March, when 635,057 tons were moved. There were only 137 vessels moved that month, however, while in June 143 vessels carried only 603,180 tons. In May 142 vessels carried a still smaller tonnage.

**Victoria Harbor Improvement Works.**—water and piers at Ogden Point, Victoria, B.C., is proceeding rapidly. The break-work on the construction of the breakwater will extend out to sea about 1,500 feet, and from the end will project an elbow about 750 feet long. The base of this will be about 200 feet wide and 50 feet high, composed of rubble, capped with granite blocks and concrete. On the eastern side there will be a pier 1,000 feet long, and on the western side one of 800 feet, giving accommodation for 11 ocean-going vessels. The concrete cribs for the bases of the piers are being built at Esquimalt and floated to their locations and sunk into position. The contractors for the breakwater are Sir John Jackson (Canada), Ltd., and for the piers, Grant, Smith and MacDonnell, Ltd.

# Electric Railway Department

## Motorman Instruction on the Toronto and York Radial Railway.

By A. M. Smith, Master Mechanic, Toronto and York Radial Railway.

In 1902, W. H. Moore, Assistant to President, Toronto Ry., introduced an organization of roadmasters on that line who were to operate directly on the cars. The special duties of these officers was to keep in direct touch with the men on their respective runs, so as to be ready at all times to instruct them in their duties when necessary to improve the service, with the result that a more regular service was maintained, careless men disciplined, defects reported and complaints investigated. Official attention given to these matters soon showed their worth, not only in improving the men, but the officials obtained information otherwise overlooked and of value to the management.

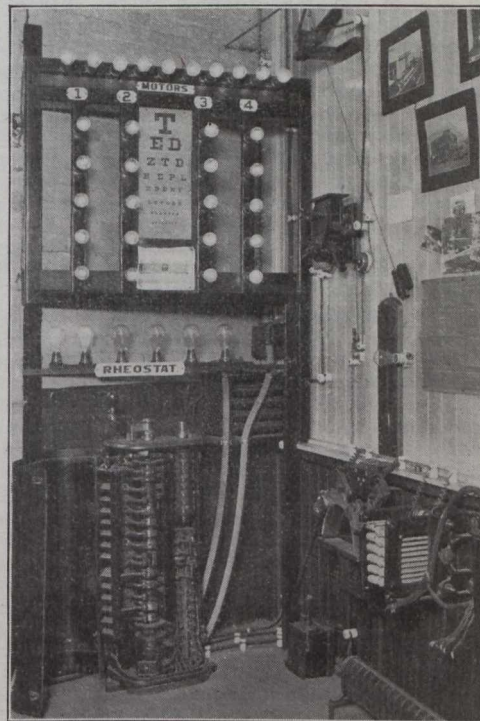
Meetings of the roadmasters were held from time to time, at which suggested improvements were open to discussion by the roadmasters, and these meetings were greatly encouraged by the presence of the superior officers when possible for them to attend, who assisted and encouraged the men, and corrected any errors that might arise. The writer had the pleasure of attending and taking an active part in these discussions, the object of which was to obtain as nearly as possible an uninterrupted service, better conditions and safe transportation, all of which naturally involved the selection of better men.

Instructions were prepared and given to the roadmasters, who in turn instructed their men, so that when a new man was trained as a motorman, he was not sent to the official responsible for final examination without first being properly prepared by the roadmaster, resulting in a considerable saving in time.

After the introduction of this system of instruction, it became apparent that something more than mere verbal instruction was necessary to properly demonstrate the practical side of their duties. Therefore, in 1903, the writer prepared a system of lamps, similar to that shown in the accompanying illustration, for this purpose, to show as nearly as possible the exact working of the electrical equipment on the car, and so arranged that breakdowns such as occur on the line could be demonstrated, and the methods of locating and repairing the trouble visualized. This arrangement shows a controller, each motor separate, rheostat, etc. The practice in using this system was to cause one roadmaster to leave the room while another disabled the equipment, the absent roadmaster on returning being instructed to locate the trouble, and when located, to make temporary repairs or cut out the defective part, and proceed. The other roadmasters took a keen interest in these tests, absorbing as much information as possible, and anxiously waiting their turn to locate and repair defects. As one roadmaster remarked after submitting to this test, "We were only drivers before, now we are motormen." When the trouble was located and a repair made, the lights would indicate whether it was performed correctly or not. These lights would show the motors cut out, effect of one motor being open, sectional and unit operation of the rheostat the lights replacing acceleration, and they would also show plainly the action of the different parts of the equipment. This left little doubt in the minds of those receiving instructions as to just

what should be done in the event of any breakdown.

All motormen on the Toronto and York Radial Ry. receive similar instruction on the equipment shown in the illustration, and my department has been greatly benefited in the saving of time and the convenience of having the men trained and capable of repairing minor defects, and bringing home the car without having to send out men from the mechanical department, perhaps miles up the line. All motormen train ten days with an instructor, after which they receive their final examination on the system. At the same time the necessity for care, responsibility and obedience is impressed on their minds. The results obtained have been very gratifying to me,



Arrangement of Lamps for Instruction Purposes, Toronto and York Radial Railway.

and I feel justified in saying that I believe Mr. Moore was in many ways amply repaid for undertaking such an organization, which at that early date was responsible for showing the necessity for safety first methods in more careful training. I have used this system for years, and still use it with very satisfactory results.

(EDITORIAL NOTE.—One of Canadian Railway and Marine World's editorial staff was present recently at the examination of a candidate for motorman, to observe the operation of the system. The candidates are first given ten days road instruction as mentioned above, by trained and older motormen, who have demonstrated their ability to impart the necessary instruction. The final examination is made by Mr. Smith personally, the equipment shown in the illustration being located in a corner of his office.

The method followed by Mr. Smith is rather unique, but the results obtained would seem to demonstrate the value of

the method followed. The examination may be said to be in two parts: first, a general talk and queries, and second, a practical test on the demonstration board. The remarks open with a few words intended to instil loyalty in the candidate. This is emphasized by a simple comparison between a jeweller selling a watch, and the motorman selling his services, the inference being that in both cases value must be given, or the motorman is not living up to his obligations. This is followed by a reading of the more salient sections of the Ontario Railway Act, in so far as they affect the prospective motorman. A general talk follows on the evils of taking chances, and the duties of the motorman at crossings, switches, etc. Special emphasis is placed on the actions of the motorman in the car, as the company is judged by the actions of its employees.

The candidate is required to give the path of the electricity through the car, which is followed by a general talk on the use and duties of equipment parts; knowledge of the circuit breaker, as a power control, an indicator of trouble, a protection from overcrowding of the motors, a cutout in case of the controller sticking, and a safeguard to the operator, are required of the candidate, and the several features are elaborated on by Mr. Smith. The action of the controller and rheostat, and a comparison of the combination with a valve are brought to the candidate's attention.

The candidate is then taken to the test board, and the action of the car under normal operating conditions shown, the lights gradually increasing in intensity, representing the increasing power to the motors as the controller is moved from the off to the on position, the row of lights representing the rheostat, also sections being cut out one by one as the controller is moved forward, this and the action of the motors in this change being shown clearly by the action of the banks of lights.

Various defects are made in the outfit, by unscrewing lamps to represent dead motors, broken rheostat grids and fouled controller sections. It shows in all cases the method of locating the difficulty on the cars and repairing or cutting out the same so as to reach home without assistance from the shops. The whole examination takes about 1½ hours.)

## Special Track Work, Etc., for Toronto Civic Railway.

The Toronto City Council has awarded contracts for the Lansdowne Ave. car line to the United States Steel Products Co. as follows:

Double track branch-off for intersection of St. Clair Ave. and Lansdowne Ave., \$2,125. Diamond for intersection of Toronto Suburban and Toronto Civic Rys., \$789. Curved rail layout for Lansdowne Ave., \$1,328. Two 100-ft. centre radius right-hand cross-overs for Lansdowne Ave., near St. Clair Ave and for Lansdowne Ave., near C.P.R., \$1,140 each.

For the Lansdowne Ave. line extension contracts were given the some company as follows:—Tie rods, 33c. each; tie plates, 28c. each.

### Rail and Track Dispute in St. John, New Brunswick.

Up to May 22 last, when the City of St. John, N. B., wished to make any change in grade, it was in the habit of requesting the St. John Ry. to make the necessary change in grade rails, the city then putting in the concrete base and pavement under an agreement which existed with the company, whereby a stated sum was to be paid to the city monthly, in advance, relieving the company of any liability regarding the repairing of streets. On April 6 the following resolution was moved by the City Commissioner of Public Works, and passed by the Common Council:—"Whenever the rails of the Saint John Ry. Co. are renewed for any purpose, it will be necessary for the company to replace them with grooved rails, and this council now approves of grooved rails to be adopted for use on city streets."

The Company's contention was that permission having been given to lay one kind of rail, in making repairs they had a perfect right to repair with the same type of rail as removed, i.e., that if a T rail had been laid under permission of the council, repairs could be made with T rails. This was opposed by the Commissioner of Public Works, and he also ordered the company to put in a concrete foundation. The company refused to put in grooved rails at the corner of Princess and Sydney Streets and the Commissioner of Public Works removed the rails. After considerable argument before the Commissioner of Public Works, and letters to and from the Mayor, the company and the city agreed to leave the matter to a stated case to be heard before the Supreme Court.

On June 2, the Commissioner of Public Works ordered the company to tear up its tracks and concrete base at the intersection of Union and Waterloo Streets and put in grooved rails, as he was altering the grade of the street from nothing to half an inch over a distance of about 120 ft. Representatives from the railway met the Common Council on that date at 4 p.m., and were promised consideration. On June 3, at 7 a.m., the Commissioner of Public Works tore up the company's tracks at the above mentioned intersection and, before the company could procure an injunction, placed a tar macadam pavement where the rails had been. An injunction was obtained at 5 p.m. on June 3, and is still in force.

The company, immediately following the action of the Commissioner of Public Works, and on receipt of the injunction, agreed to another stated case, and judgment was given that the company's contention was correct.

Subsequent to the occurrences outlined above the differences between the city and the company reached the courts in a new form. Under a recent decision the company was directed to bring its tracks to a level with the street paving, etc., and to put a permanent foundation under them, where the city was doing repaving work. Within the last month or so some repaving work has been in progress and differences have arisen, and to what should or should not have been done. Matters reached a climax, Sept. 6, when the city employees took up a section of the company's tracks on Main St., and filled the space with concrete. Commissioner Potts stated that the company had had ample time to bring these tracks up level with the street paving, and claimed to be justified in removing them. The company secured an injunction restraining the city from any further interference with the tracks and directing the restoration of them. The work of removal was stopped, but nothing was done

in the way of restoration of the tracks removed. Proceedings were taken against the Mayor and Commissioner Potts for not having obeyed the injunction, and the first hearing was given by Justice Grimmer, Sept. 18. A number of affidavits were put before the court, and some legal arguments were put forward, before an adjournment was made until Sept. 26.

### Edmonton Radial Railway Employees' Wages.

The employees of the Edmonton, Alberta, Radial Ry., on Sept. 5, adopted by vote a new wages agreement, as from Aug. 31, which is to be renewed from year to year, either side having power to give the other 30 days notice of a desire to change any of the conditions. The schedule of wages per hour is as follows: For conductors and motormen: First six months, 26c. Second six months, 28.5c. Commencing 2nd year, 32c. Commencing 3rd year and thereafter, 34c.

Car barns department: Electricians, painters, carpenters, machinists and fitters and blacksmiths shall be paid the recognized rate of wages as adopted by the City of Edmonton under the fair wage clause as amended Mar. 2, 1915.

Barn men and car repairers: First six months, 26c. Second six months, 28.5c. Commencing the 2nd year, 32c. Commencing 3rd year and thereafter, 34c. Experienced car repairers, 36c.

Car cleaners: Head car cleaners, 32c. Other car cleaners, 28.5c. Track greasers, 30c.

### Sherbrooke Railway and Power Company's Annual Report.

Following are extracts from the report for the year ended June 30:—

"The directors feel, that while results were not as good as anticipated, the shareholders are to be congratulated that, under the circumstances, the company has been able to hold its own. As a result of the war many manufacturers curtailed their operations, thus reducing the demand for power and this naturally affected the revenue from electric light and street railway departments. To make up for this reduction in revenue, your directors decided to purchase the lighting and power business of Waterville and Compton, together with certain rights in the Coaticook River Power Co. and an undeveloped water power and were also obliged to extend several lines to secure other contracts. As a result practically the whole of the power from the present development has been sold and will substantially increase the revenue when in operation. To cover financial requirements, however, your directors being of the opinion that this is not an opportune time for the sale of long term securities, have decided to authorize the issue of \$100,000 of 7% short term notes, payable in three, four or five years, at the option of the purchaser. As these notes will be absolutely secured by double the amount of the consolidated first mortgage bonds of the company, they will no doubt be fully subscribed for. These notes will be offered in the first place to the shareholders and bondholders of the company on terms which will undoubtedly meet with their approval.

"During the year Major D. R. McCuaig, D.S.O., a director of your company, who left for the front at the beginning of the war, was seriously wounded in the battle of Langemarck and is at present in a German military camp, and has almost recovered from his wounds. This summer, Major

N. C. Pilcher, General Manager of the company, accepted a responsible appointment with the 5th Royal Mounted Rifles and has gone abroad with his company. During his absence, J. H. Trimmingham, General Superintendent of the company, will administer its affairs. Your directors desire to place on record their appreciation of the valuable and faithful services rendered by the officers and employes during a very trying period."

Assets.	
Property, plant, equipment, etc.	\$2,243,933.13
Mortgage	10,000.00
Accounts current	21,902.83
Cash on hand and in bank	3,007.64
Cash with Montreal Trust Co.	1,000.00
Cash to credit of coupon account with bank	17,137.50
Office furniture and fittings	778.85
	<u>\$2,297,760.05</u>
Liabilities.	
Capital stock	\$1,090,500.00
Bonds	1,090,500.00
Mortgage on property purchased	2,050.00
Property purchased (payable in power over a term of years)	18,950.00
Loans, Quebec Bank	20,000.00
Loans, McCuaig Bros. & Co.	33,862.47
Current accounts payable	11,816.26
Accrued interest on bonds	28,900.00
At credit of profit and loss account	1,181.32
	<u>\$2,297,760.05</u>
Gross revenue from railway, power, light, real estate rentals, etc.	\$146,769.00
Expenditure: Operation, maintenance and management	90,848.29
Net revenue for 1915	\$55,920.71
Balance at credit of 1914	1,157.19
	<u>\$57,077.90</u>
<b>Less:</b>	
Interest on bonds	\$54,535.00
Less interest during establishment	5,000.00
	<u>\$49,535.00</u>
Head office and legal expenses	1,780.24
Interest on current liabilities	4,204.64
Bad debts written off	376.70
	<u>55,896.58</u>
Balance carried forward to credit of profit and loss	\$1,181.32

### Calgary Municipal Railway Annual Report.

The report for the year ended June 30 shows that the City of Calgary, Alta., owns and operates 71.5 miles of track, computed as single track. Of this 15.5 miles is double track and 1 mile sidings and turnouts. The total cost of construction and equipment was \$2,240,227.93, or \$31,331.85 a mile. The employees number 272 and the aggregate salaries and wages paid for the year was \$277,894.17. The total number of cars operated was 99, of which 12 are without equipment, such as trailers and work cars. During the year, no passengers or employes were killed, but 5 passengers, 2 employes and 3 others were injured. Following are statistics for the year:—

Operating earnings	\$611,826.85
Operating expenses	428,797.18
Net earnings	\$183,029.67
Interest on deposits	13,660.87
Total income	<u>\$196,690.54</u>
Taxes	\$ 3,316.42
Rental, land and conduits	1,012.39
Interest on funded debt	106,359.48
Interest on floating debt	2,023.04
	<u>112,811.33</u>
Net income	\$ 83,879.21
Reserves and sinking fund charges	74,984.89
	<u>\$ 8,894.32</u>
Surplus	
Car earnings	\$593,437.28
Chartered cars	1,109.35
Freight	2,522.02
Sprinkling	4,961.51
	<u>\$602,030.16</u>
Advertising earnings	\$9,626.69
Post card sales	170.00
	<u>\$ 9,796.69</u>
Maintenance of way and structures	\$ 11,566.42
Maintenance of equipment	\$ 44,270.75
Transportation, hired power	\$ 92,816.52



Operation of cars .....	\$240,264.27
General expenses, etc. ....	\$ 39,879.21
Ratio of operating expenses to gross earnings .....	70.08%
Ratio of operating expenses and taxes to gross earnings .....	70.62%
Total car mileage .....	2,822,699
Total car hours .....	298,185
Fare passengers carried .....	14,073,273
Transfers .....	5,000,000
Average per revenue passenger .....	4.216c.
Average all passengers .....	3.058c.
Passenger earnings per car mile .....	21.328c.
Miscellaneous earnings per car mile .....	0.347c.
Total earnings per car hour .....	\$2.05
Operating expenses per car mile .....	15.191c.
Operating expenses and taxes per car mile .....	15.308c.
Operating expenses per car hour .....	\$1.43

**The Jitney Situation in Canada.**

One feature of the jitney movement has brought considerable sums to the Red Cross funds in Canada. Private owners have loaned their cars for use to run from railway stations to golf grounds and summer resorts; from towns to the scene of garden parties, and in a few instances a regular service is given to make connection with electric car lines. In all these cases the total amount of the fares goes to the patriotic fund; the owners of the cars pay the bills, and some member of the car owner's family or friend runs the car. There are other so called jitney services in a considerable number of towns, competing with the railway town bus, and otherwise. Neither of these kinds of service, which are temporary, irregular and unlicensed, have any bearing on the organized and licensed jitney services in the cities.

In Toronto the jitney situation was not in any way complicated by the holding of the annual exhibition. A considerable number of the vehicles ran on routes to the exhibition and did a good business, but with the closing of the exhibition, the regular routes were resumed, and any extra vehicles that had been running dropped out. It is not definitely known how many jitneys are now actually in service, but there certainly are not so many as there were a month ago.

The Winnipeg city licensing committee took up, on Aug. 28, the question of the drawing up of a bylaw for the regulation of the traffic in that city, and met R. W. Craig, the legal representative of the Winnipeg General Jitney Despatch and other owners, to discuss its terms.

It was reported in Winnipeg, Sept. 14, that there were at that date 635 jitneys in operation in the city against over 800 about three months ago.

The Vancouver Chief of Police submitted suggestions for the amendment of the street traffic bylaw at a meeting of the City Council's Fire and Police Committee on Sept. 8. The suggested amendments are for the better protection of pedestrian traffic, which the Chief is of opinion is menaced by the changed and increased vehicle traffic since jitneys have appeared on the streets.

The Victoria, B. C., City Council failed at its August sitting to agree upon the terms of a bylaw to control jitney traffic, and decided, Sept. 4, to have the bylaw redrafted so as to give effect to some suggestions made by jitney owners.

Outside Toronto, Winnipeg and Victoria, the situation is apparently not under discussion in any way.

Statistical and other information gathered in the United States points to the conclusion that the average "jitney" driver stays in the business about 60 days, and that the highwater mark of the traffic in any city is reached in about five months. These facts seem to suggest, one United States paper points out, that the life of the movement is not going to be measured by the ultimate life of the cars put into the service, but rather by the number of the

drivers who can be induced to enter the service. It is pointed out that so long as the cars are in good condition and the cost of the upkeep at a minimum considerable apparent profits can be made, and that as soon as the overhead charges mount up the driver gets disgusted and disappears from the service, because the returns are not equal to the outgoings. This is found to be the experience even in Los Angeles, where restrictive regulations are practically non-existent.

The City of Portland, Ore., grants licenses to operate jitneys at \$2 a month for a seven seated car and 25c. a month for every extra seat. The regulations provide among other things that the cars must operate on regular routes, and to provide for rush hour traffic must operate to the outer terminals between 6 and 8 a.m. and between 4.30 and 7.30 p.m. must operate as far as the corner terminals. The Oregon City Council proposes to charge jitneys operating from that city to Portland a prohibitory fee for a license.

**The Elimination of the Running Board From Toronto Railway Cars.**

For several months the Toronto Ry. has been experimenting with various types of cars with a view to the elimination of the running board from open cars. In a report made to the city by B. J. Arnold, of Chicago, in 1912, cross seated cars were among the recommendations made. It is, however, not deemed practicable to adopt this system as, owing to the narrow devil strip in Toronto, the cars are about 12 ins. less in width than those on most of the other larger systems in Canada and the U. S. The main difficulty is in planning the seating layout of a car to meet the requirements, and three suggestions have been made. First, the cross seated centre aisle car, second, the cross over cross seated cars with half cross seats and half longitudinal seats with a zig-zag aisle, both of which were described and illustrated in Canadian Railway and Marine World for April, and third, the centre aisle car with a longitudinal seat on the inner side, and cross seats on the outer side. The first mentioned was considered impracticable on account of the narrow devil strip, and the second was considered bad practice chiefly on account of the interruption in the aisle caused by the cross over. Regarding the third suggestion, the Toronto Ry. has equipped one of its standard semi-convertible cars with cross seats on the outer side, the side which is open in the summer being closed, the only entrance being at the rear end, with exits at both front and rear. This car has been running under observation for some time, and the Ontario Railway and Municipal Board has obtained a report on it from J. C. Royce, Consulting Engineer, Toronto, and it is probable that when certain alterations are made, the design will be approved by the Board, and cars of this type gradually placed in service.

The experimental car has a longitudinal seat the full length of the car on the inner side, with accommodation for 19 persons, and 10 cross seats and two short longitudinal seats, on the outer side, with accommodation for 24 persons. The inside width of the car is 7¼ ft., divided as follows,—cross seats 33 ins., aisle 37 ins., longitudinal seat 17 ins. The total length of the car is 44 ft. 10 ins. The body is off-set on the trucks to the extent of about 2 ins. to compensate for the slightly increased width on one side, and to allow for a more perfect distribution of weight in a fully loaded car. In the report made to the Board it is suggested that the number of

cross seats be reduced to 9, thus allowing more space between the seats, and a few other alterations will probably be made in the dimensions before the plans are finally approved. The seating capacity of the proposed car is 42.

**The Electric Railway Accident at Queenston.**

The charge against E. J. Dickson, Vice President and General Manager, International Ry., of criminal negligence in connection with the accident on the Niagara Falls Park and River Ry., at Queenston, Ont., July 7, when several persons were killed and a number injured, came before the local magistrate at St. Catharines, Ont., Sept. 2. After some of the evidence taken at the inquest was read, the magistrate stated, in dismissing the case, that the General Manager could not be held responsible for any negligence on the part of the crew of the car, or of the men in the car barns, as each division of the railway is operated under a separate executive head. All the evidence showed that all rules regarding safety had been complied with and the car had all the necessary equipment. The fact that there was no sand on the car, was not the fault of the General Manager. It is a set rule of the company, that sand shall be used. Regarding track construction and curves, he pointed out that plans and specifications of the road had been submitted to the Ontario Railway and Municipal Board, and no member of the Board, nor any one else had made any suggestions in regard to making any of the curves safer. The line had been operated for over 20 years without an accident, and the company was perhaps justified in thinking that an accident could not be possible at that point.

On Sept. 17, the case against S. Boyd, the motorman in charge of the car at the time of the accident, was heard before the magistrate at St. Catharines. The only witness heard was Jas. Milne, electrical and mechanical engineer in the City of Toronto service, who stated that he would have insisted on the use of sand both in descending and ascending the hill in question. He stated that he believed the cause of the accident was that some of the brake rods must have broken unknown to the motorman, as he had found one of the brake rods with a clean break in it. In such case, the use of sand would have been unavailing. In the face of this evidence, the magistrate held that it could not be contended that the accident was due to the neglect of the motorman, and the charge was dismissed.

**Regina Municipal Railway Earnings, Etc.**

Operating results for July, compared with those for July, 1914, are as follows:—

	1915.	1914.
Revenue .....	\$15,887.44	\$23,177.00
Operating expenses .....	15,018.87	19,821.00
Capital charges .....	9,137.53	7,476.52
Deficit .....	8,268.96	4,120.52
Expenses per car mile ... (excluding power) ..	14.19c.	16.45c.
Expenses per car mile ... (including power) ..	18.37c.	21.42c.
Power per k.w.h. ....	2.05c.	2.00c.
Platform wages per car hour ..	75.97c.	81.26c.
Expenses per cent. of earnings less capital charges.	94.53	
Expenses per cent. of earnings with capital charges.	152.05	

**London & Port Stanley Ry. Traffic.**—A London, Ont. press dispatch says that arrangements have been made between the L. & P. S. Ry. and the Wabash Rd., for an interchange of freight and passenger traffic.

# British Columbia Electric Railway Employees' Wages Arbitrated and Reduced.

A new agreement as to wages and working conditions between the British Columbia Electric Ry. and its employes which was signed Sept. 4, is to run until six months after the cessation of the present war in Europe, with a minimum period of duration of six and a maximum period of 22 months. The basis of the agreement is the majority award of the arbitration board, made Aug. 25, which was accepted in its entirety by the company, with certain modifications subsequently made as a result of mediation of H. H. Stevens, M. P., and Dominion Fair Wage Officer McNiven.

The arbitration court consisted of Mr. Justice McDonald, chairman, appointed by the Dominion Government; A. C. McCandless, representing the company, and J. H. McVety representing the men. The board began its sittings July 19, and continued them from time to time until Aug. 13, the case for the company being put forward by W. G. Murrin, General Superintendent, and W. Saville, Chief Clerk, the men's case being presented by F. A. Hoover and W. Gates. The company desired to put in force a new schedule of wages making a reduction of 15% from that previously in force, upon the following grounds:—1. General business depression existing throughout the company's territory, which had led to an almost universal reduction of wages; 2. That the financial position of the company, owing to decreased business, made it unable to continue the old wage rate; 3. That if the rate of wages was determined by the cost of living, such cost had decreased since the last wage agreement was signed in 1913; 4. That the wages paid by the company were, in general, higher than those paid by other street railways; 5. That the wages paid had advanced 8% since 1913, because of the sliding scale, this increase coming in the face of decreased business; and in a general way the company argued that the rate of wages should depend upon the supply of and the demand for labor. The men submitted that there should not be any reduction, claiming that the wage scale which had prevailed could not be designated a living wage; that through the time of prosperity the wages should have been higher, and that the cost of living had increased since 1913.

The majority report, signed by the chairman and A. C. McCandless, goes fully into the questions coming before the board, and the evidence given upon them, and concludes as follows:—"The majority of the board feel satisfied that for the reasons stated we are warranted in recommending the adoption by the parties interested, of the agreement enclosed herewith containing reductions as shown by the wage schedule. After due consideration we trust that it will be deemed satisfactory to both sides. In the working conditions, the seniority clause remains intact. This protection, when coupled with efficiency, creates permanency of employment, more especially to those who, by length of service, have secured to themselves an advantageous position under this privilege. It appeared to us of even greater benefit at this time, when so many men are waiting to fill any vacancies that might exist in the service of the company. In fixing a rate of wages, we have not attempted to capitalize in dollars and cents the concessions above referred to, but have not overlooked their consideration. They have in the past, and doubtless will in the future weigh considerably with the employes, especially those having families dependent upon them. We have also, in making our recommendations,

borne in mind the permanency of employment that will be guaranteed to the employes by the execution of an agreement covering a definite period. In fixing the time during which we recommend the agreement to exist, we thought it well that it should expire within the same period of time as the current agreement. Various changes in the working conditions of the existing agreement were advocated by both sides. The 'seniority clause' was vigorously attacked by the company, and it was strongly contended that its operation interfered with the proper carrying on of the work, especially in the shop and barn department. This point was fully considered before the last board, and we see no reason to interfere with the decision then arrived at. The company then, as now, submitted that the practice infringed upon the principle of control that should be usually exercised, untrammelled, by the employer. What the company doubtless desired, was good results from the workmen. For that purpose, in order to safeguard the company, a clause was inserted and still remains, providing that the company has the absolute right of dismissal in case of inefficiency. The other matters in the working conditions considered were not of vital importance. We suggest some changes, but in the main we deem it advisable not to interfere to any extent with the arrangements that had already been in force between the parties for a lengthy period with little apparent friction. The Board unanimously recommends the adoption of the working conditions as changed."

The following is the wage schedule attached:—City and interurban lines, motormen and conductors shall receive per hour:

First year .....	26c
Second year .....	27½c
Third year .....	29c
Fourth year .....	30½c
After fourth year .....	32c

Motormen and conductors in work train service shall receive 1½c an hour in addition to the above rates.

[Editor's note: The previous wage scale for motormen and conductors on city lines was, per hour:

First year .....	27c
Second year .....	29c
Third year .....	31c
Fourth year .....	33c
After fourth year .....	35c

The reduction noted by a comparison of the old and new scale in this field of work runs, in general, throughout the entire revised scale.]

On interurban lines, being District 1, New Westminster, (Central Park) line, District 4, New Westminster (Burnaby Lake) line, and also on Saanich line per hour:

First year .....	27½c
Second year .....	29c
Third year .....	30½c
Fourth year .....	32c
After fourth year .....	33½c

Brake men, trolley men and baggagemen on these lines shall receive per hour:

For the first six months .....	25c
For the second six months .....	26c
For the second year .....	26½c
For the third year .....	27½c
For the fourth year and after .....	28½c

Shop and barn wages:

Car cleaners .....	25c
Motor car repairers, armature winders helpers, blacksmith helpers, carpenters helpers, machinists' helpers and sawyers, per hour:	
First year .....	26c
Second year .....	27½c
Third year .....	29c
Fourth year .....	30½c
After fourth year .....	32c
Freight car repairers .....	28c

Freight car repairers' helpers .....	25c
Freight car inspectors .....	30c
Painters .....	39c
Freight car and rough painters .....	29½c
Brush hands .....	26c
Carpenters .....	39c
Freight car carpenters .....	33c
Machinists .....	42½c
Babbiter .....	33½c
Trolley retriever repairer .....	35c
Blacksmiths .....	42½c
Car wire men .....	38c
Air brake fitters .....	38c
Armature winders, 1st class .....	42c
Armature winders, 2nd class .....	40c
Armature winders, 3rd class .....	38c

Leading hands, while so acting, to receive beyond regular pay, 3c extra per hour.

Apprentices:	
First year .....	15c
Second year .....	18c
Third year .....	22c
Fourth year .....	27c

Freight shed department:	
Checkers .....	28c
Truckers .....	26c

Maintenance of way men:	
First nine months .....	24c
After nine months .....	25c
Track greasers .....	25c

Blacksmiths, same rate as shop blacksmiths.

Motormen:	
First year .....	28½c
Second year .....	30c
Third year and after .....	31½c

Employes paid monthly, per month:	
House light troublemen .....	\$87.50
Assistant house light troublemen .....	60.00
Baggage room men (Vancouver) .....	78.00
do. (New Westminster) .....	65.00
Teamsters .....	62.50
Interlocking tower men .....	60.00

The men's representative, J. H. McVety, submitted a minority report in which he gives reasons for dissenting from the majority report; and states why, in his opinion, the company's contentions should not be accepted, and concludes by recommending the continuance of the old agreement.

Between Aug. 26 and 29, meetings of the employes' unions in Vancouver, New Westminster and Victoria were held, at which the award was discussed and a ballot was taken Aug. 30, at which a large majority of the men voted against the acceptance of the majority report. On the following day a committee representing the men, waited on George Kidd, General Manager, and asked whether the company would put forward any concessions, so that they might be considered when the report on the ballot was made to the men. Mr. Kidd stated that the company had decided to accept the majority report in its entirety, and would not consider any concessions. Communications were then opened by the men with the officers of the International organization at Detroit, and it is said that they refused to lend the necessary endorsement and financial aid, without which a strike could not be declared and carried on.

On Aug. 31, the company's General Manager sent a letter to each employe, in which he said: "The award of the majority of the board is anything but satisfactory to the company, as we contended, and still contend, that we are entitled to a reduction of 15% on our total wage bill, and also to considerable relief from the onerous working conditions contained in the agreement which has now expired. Instead of obtaining the relief for which the company asked a reduction of about 8% on its total wage bill has been recommended, and the working conditions are practically unaltered. Under these circumstances the company would be justified in refusing to accept the award. Bearing in mind, however, the conditions prevailing in the province, and fully realizing the necessity of avoiding any trouble

which might still further prejudice the business interests and general welfare of the community, the company has decided to accept the recommendations of the majority of the board. The board recommended that the new wages schedule and working conditions should take effect on Sept. 1. Realizing, however, that the company has only today notified your committee of its intention to accept the award, it has been decided to continue the existing wages schedule and working conditions for one week. Should you finally decide not to accept service on the terms laid down by the majority of the board, which will, therefore, come into effect on Sept. 8, your decision will be received by the company with great regret, as we much prefer employes who have been for many years upon our pay rolls to continue the operation of our system. At the same time your decision will not in any way affect the company's intention of adhering literally to the terms of the recommendation signed by the majority of the board.

"In the event of your refusing to continue the performance of your duties, the following course will be pursued by the company: Forty-eight hours will be given you in which to reconsider your decision. If during this time you should present yourself for duty, your services will be accepted at the rate and under the conditions laid down by the board of conciliation, but should you not during this time be willing to accept service, your name will be erased from the company's books. In the event of your deciding to leave our employ, you will be instructed to hand in, within 48 hours referred to, your badge, pass, punch, change-fund and any equipment which may be the property of the company. All seniority rights will expire within 48 hours of your failure to appear for duty, and any man afterwards engaged to carry on the company's service will have a seniority standing dating from the acceptance of his application. All men so engaged will be treated as first-year men and paid accordingly. The company has arranged, as far as possible, to pay to all employes who present themselves within the 48 hours, for the purpose of returning their equipment, all moneys which may be due to them.

"I place these matters before you clearly so that you may, before taking any steps which you may afterwards regret, have no excuse for saying that you did not understand the true facts of the case, or the true intention of the company concerning this matter, and although, as I have said, the company much prefers, for the sake of peace, to operate under the award with its old employes, yet it cannot and will not under any circumstances deviate from the conditions herein described to you."

The men met at their several centres at midnight, Sept. 1, at which the employes' committee presented a report, which it is said stated that the international executive refused to endorse a strike, mainly on account of adverse industrial conditions prevailing in Western Canada, due to trade depression and the effect of the war; and that while the executive sympathized with the men, they could only advise that the majority award be accepted under protest. The committee further reported that during the day the company had consented to certain amendments being made in the majority award. These consisted in making the agreement to run for a minimum period of 12 months and a maximum period of 22 months; and providing that employes should become and remain members of the union. The fact, however, that an employe ceases to be a member of the union does not, the understanding is, entitle its executive to demand

that he be dismissed from the service. In such cases the General Manager shall give a decision on the point, and if this is not considered satisfactory the matter shall be settled by arbitration. The meeting adjourned without ordering a strike, and on Sept. 3, a ballot was taken, when the majority report as amended was adopted, and the agreement was signed Sept. 4.

### Calgary Municipal Railway Results.

In the annual report of the City of Calgary, Alta., for 1914, the Commissioners state that the street railway department has suffered more from financial conditions than any other of the city's departments, the earnings having decreased considerably as compared with former years. The operating and overhead charges were reduced to a minimum, with the result that passengers are being carried at as low a rate, or lower than in any other Canadian city, length of haul being considered. The auditors report that the Superintendent of the railway, T. H. McCauley, had long urged that the depreciation charged against the railway was excessive, and after a consultation and examination, a few unimportant adjustments were made in the rates, some being made fractionally lower and some fractionally higher. The rate which had been fixed for track and road way at 7½%, was reduced to 5%, but only temporarily, in view of the greatly diminished traffic and resulting wear and tear, but it was stipulated that as soon as the traffic increases, the rate is to revert to the old figure. The rate fixed for depreciation on the power plant machinery was also reduced from 7½% to 6%, as it is not being used to its full capacity, and the same stipulation was made in this case. The reduction in the depreciation rate on track and roadway resulted in a saving of approximately \$27,000, and on the power plant machinery, of over \$11,000, while reducing the cost of the current to the railway permitted a refund to the railway on the cost of its power, of \$9,383.26.

The balance sheet of the street railway department for the year shows total assets of \$2,404,281.26, with liabilities of \$2,325,429.12, the net revenue account showing a credit balance of \$78,852.14.

### Quebec Railway, Light, Heat and Power Company's Annual Meeting.

The annual meeting was held at Montreal, Sept. 14, when the report for the year ended June 30, showed a total revenue of \$1,784,074, an increase of \$17,076; operating and maintenance expenses \$465,817, an increase of \$11,715; fixed charges and taxes \$735,482, leaving a net surplus of \$114,775, which added to the surplus brought forward from the previous year, makes a total available surplus of \$347,444.45.

The President, Sir Rodolphe Forget, stated that an announcement would be made shortly thereafter regarding the sale of a section of the Quebec and Saguenay Ry., which has been a heavy loss to the company.

The retiring directors were re-elected and five new ones were added, as follows:—President, Sir Rodolphe Forget; Vice President, L. C. Webster; other directors, D. O. Lesperance, J. N. Greenshields, Hon. Robert Mackay, P. Galibert, L. J. Tarte, A. Berthiaume, A. Terement, T. Bastien and L. Morin.

### Answers to Questions on Electric Railway Topics.

Following are questions submitted to the American Electric Railway Association's question box, with replies thereto by W. F. Graves, Chief Engineer, Montreal Tramways Co.:—

Will any member company having a large number of plans to care for, both of its own and of foreign make, which has perfected a system of filing and indexing the same, briefly describe the system and method of keeping it up?

In our system of filing drawings, the foreign prints are kept separate from our own drawings, the foreign prints having a consecutive number given to them and catalogued under the title of the drawing by means of a card system. Our own drawings are divided into different classes, such as Intersections, Right of Way, Cars, etc., and each class is given a distinguishing letter A, B, C, etc., corresponding to the drawer letter; drawers A, B, C, etc., are then divided into different sizes, and the record of these drawings is kept in a loose leaf book, numbered consecutively under the class heading, and also in a card index under the title of the drawing, thus—Intersection—St. James & McGill would be numbered 160 N. F., which would indicate that it was in drawer N and the size of the drawing was 17 x 33 ins., while drawing of Track Bolts numbered 160 L. D. would indicate that it was in drawer L and the size of the drawing was 8½ x 11 ins.

Standard Drawings.	Rolled Drawings.
8½ × 11 ins. = D.	11 ins. Wide = J.
11 × 17 ins. = C.	17 ins. Wide = K.
17 × 22 ins. = B.	22 ins. Wide = L.
22 × 34 ins. = A.	33 ins. Wide = M.
17 × 33 ins. = F.	44 ins. Wide = N.

To what extent is salt used in connection with keeping the track clear during snow storms or immediately afterwards? Is its use confined mostly to special work, or is it used upon the straight track?

Our average snow fall during the winter is 120 ins., resulting in the use of large quantities of salt, principally around switches and curves. During severe snow and freezing weather, we use salt at the approaches to intersections, also use salt and sand mixed, applied by hand, on important hills, of which we have a number on this property. In a milder climate, I have used salt brine, ranging from a saturate solution up, according to the temperature, and applied from barrels at the special work.

Does it pay to inspect manufacturers' special work?

My opinion is that it is essential that special work be inspected at the manufacturers. The amount of money involved in making such an inspection is small compared with the expense of the layout.

What is the best foundation for special work, crushed stone or concrete?

Crushed stone, owing to its resiliency, facilities for drainage, ease of resurfacing and repairing, is the best foundation for special work.

Does the track well ballasted with crushed stone require a longitudinal drain pipe?

In an impermeable clay soil, a farm tile drain should be installed, either in the centre between tracks or in the track space and the excavation sloped toward such drain, which should be connected with the sewer at stated places, whether the track foundation be concrete or stone.

In large construction work, is it more economical to contract car house wiring or should the railway company do the work?

In my opinion, the railway company should do its own wiring in and about car houses.

This may not, in instances, be the most economical procedure, but my experience is that it is the most satisfactory in the end.

In cases where trolley troughing is used on steel girders, and hangers are rigidly fastened to the troughing, what satis-

factory methods have been employed to deaden the noise?

The placing of stripped felt about 1/4 in. thick, or of asbestos fibre, between the trolley board and the structure, tends to deaden the noise of passing cars.

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

**Brandon Municipal Ry.**—A press report states that the Percy St. extension was placed in operation Sept. 1, and that material is on hand for a further extension along College Ave. and 18th St. (Aug., pg. 318.)

**British Columbia Electric Ry.**—The New Westminster City Council passed a resolution, Sept. 1, calling on the company to carry on permanent work on a number of streets in the city. (Aug., pg. 318.)

**Edmonton Radial Ry.**—An arrangement is reported to have been concluded between the Edmonton, Alberta, City Council, and the Interurban Ry. for the operation by the Edmonton Radial Ry. of the Interurban Ry. line from the city limits to West Edmonton or, as it is sometimes called, Calder. The Interurban Ry. extends from the city limits to St. Albert, and has not been operated since its gasoline car was burned. The West Edmonton residents desired to have a service and the present arrangement is said to be for the electrifying of the line to that suburb, the material for which the city has on hand in its railway stores, and the operation of the piece of line as a part of the city lines. No rental is to be paid for the use of the line until operating expenses are met, after which the surplus is to be paid to the Interurban Ry. until 8% on the ascertained cost of construction has been paid, and all subsequent earnings are to go to the Edmonton Radial Ry. The agreement will run for five years. (Sept., pg. 359.)

**Hydro Electric Power Commission of Ontario.**—The Ontario Municipal Association at its annual meeting in Toronto, Sept. 2, listened to an address by Chief Engineer Gaby, of the Commission, upon the construction of electric railways by municipalities under the Commission's general control. He stated that within a few weeks reports would be ready for presentation to the various municipalities interested, showing the estimated cost of a network of electric railways throughout the western portion of the Province. The engineers' reports upon which the general report was based, had been received, covering about 300 municipalities and representing about 1,600 miles of line, in the districts from Whitby in the east to Sarnia in the west, including the county of Huron, and the arm from the Niagara Peninsula northerly to Georgian Bay. The reports would show the estimated cost of construction for the highest standard of road and equipment, and the general statistical tables would show the estimated traffic.

A committee of the Windsor, Ont., City Council, acting in conjunction with the Hydro Electric Power Commission of Ontario, is considering the electric railway situation in the city and vicinity, and it was reported, Sept. 9, that the question of the purchase of the Sandwich, Windsor and Amherstburg Ry. by the city and the other municipalities interested would be considered. (Sept., pg. 359.)

**Lethbridge Municipal Ry.**—The Lethbridge, Alberta, City Commissioners have decided to lay over for the present the proposal to extend the municipal railway to Hardieville. The proposed extension would be two miles long, and it was suggested that some of the second track in the city might be taken up and laid to Hardieville.

**Moncton Tramways, Electricity and Gas Co.**—We are officially advised that the company is laying a double track line through the new subway on Main St., under the Intercolonial Ry., 300 ft. The special work for this double track has been ordered from Canadian Steel Foundries Ltd. (July, pg. 277.)

**Montreal Tramways Co.**—We are officially advised that the company has laid two miles of new track, and has reconstructed about 15 miles of single track on various streets. It is contemplating the reconstruction of an additional three miles on various streets. It has placed an order in the U. S. for 1,500 tons of 115-462 girder rail.

The City Engineer of Montreal is reported to have said, Sept. 10, that there were a number of streets in the city upon which repairs to the roadbed were urgently needed, but to which nothing could be done because the M. T. Co. would not put its tracks in proper condition. The streets referred to include Notre Dame St., between St. Francois Xavier and Berri Sts. (July, pg. 277.)

**Peterborough Radial Ry.**—We are officially advised that the reconstruction of track on Charlotte, Park and George Streets, rendered necessary by the city paving, is expected to be completed during October. All the material has been ordered. (July, pg. 277.)

**Quebec Ry., Light and Power Co.**—A press report states that the station building on the Champlain Market site, at Quebec, together with the line built there via Sillery to the Quebec Bridge, are likely to be sold by the Dominion Government, to the Q. R., L. and P. Co., and that the line will be electrified. (July, pg. 278.)

**Sandwich, Windsor and Amherstburg Ry.**—The terms of a franchise proposed to be given to the company, or its subsidiary, the Windsor and Tecumseh Electric Ry., for the construction of a belt line in Walkerville, Ont., will, it was reported, Sept. 16, be submitted to the ratepayers for a vote at an early date. (July, pg. 277.)

**Three Rivers Traction Co.**—We are officially advised that track has been laid on streets in Three Rivers, for 3.5 miles. The overhead work is being put up, and a car barn is in process of construction. It is expected to put this line in operation before the end of the year. Very little progress has been made in respect of the suburban line owing to the terms which the municipality asks for a franchise. (June, pg. 229.)

**Transcona, Man.**—The town council has granted a 25 years exclusive franchise, renewable for five years, and at the end of every five years thereafter, reserving to itself the right to take over the line, on terms to be fixed by the Public Utilities Commission. The franchise requires that work be started immediately, the line to the Winnipeg city boundary to be completed first, and the whole of the lines set out in the schedule to be completed within two years. H. W. Adcock, of Winnipeg, who has the charter, states that he proposes to form a company and that he will apply for a Dominion charter of incorporation for the Winnipeg Interurban Ry. Co. (Aug., pg. 319.)

### Electric Railway Finance, Meetings, Etc.

**Brantford Municipal Ry.**—Details accompanying the report of the Commissioners, a summary of which was given in Canadian Railway and Marine World for September, on pg. 358, were presented to the City Council, Sept. 1. The accounts were for six months ended June 30. Of the total earnings of \$42,505.79, the line in the city earned \$20,943.81, and the Grand Valley Ry. \$21,561.98, the operating expenses being \$18,290.04 and \$15,931.85 respectively. During the six months the car mileage run was 123,180 on the Brantford lines, and 82,663 on the G.V.R.

**Cape Breton Electric Co.**

	July 1, 1914	July 1, 1914	July 1, 1914	July 1, 1914
		to	to	to
	June 1915	June 1914	June 30, 1915	June 30, 1915
Gross earnings	\$27,832.40	\$29,606.95	\$155,597.52	\$167,321.73
Expenses	17,856.21	17,595.13	98,111.36	101,063.51
Net earnings	9,976.19	12,011.82	57,486.16	66,318.22

**Halifax Electric Tramway Co.**—The total earnings for 1914 were \$645,241 against \$605,933 for the previous year. The earnings for the street railway alone were \$319,880 in 1914 and \$301,771 in 1913. The operating expenses and taxes were \$375,123 against \$337,010, and the bond interest was \$30,000 in each year. The net earnings were \$239,818 in 1914 as against \$238,924 in the previous year. During 1914, 7,316,727 passengers were carried, the car mileage being 1,370,430, against 6,876,003 passengers carried, with a car mileage of 1,275,527 in 1913. The capital expenditures in 1914 were \$41,864, and amounts paid in dividends, \$112,000.

**London St. Ry.**

	Aug., 1915	Aug., 1914	Jan. 1 to Aug. 31, 1915	Jan. 1 to Aug. 31, 1914
Gross earnings	\$34,273.14	\$37,084.89	\$2,732,147	\$249,048.47
Expenses	23,935.67	24,295.97	182,215.81	177,570.61
Net earnings	10,337.47	12,788.92	75,113.86	71,477.78

**Montreal Tramways Co.**—Subscriptions will be received to October 25, from shareholders of record Sept. 10, for a new issue of common stock at par, in the proportion of one share for every three shares now held. Ten per cent. is to be paid on application, and the balance will be called up as required by the directors upon giving two months notice.

**Oshawa Ry.**—The annual meeting was held at Deseronto, Ont., Sept. 13. Following are the directors for the current year: President, E. W. Rathbun, Deseronto; Secretary-Treasurer, J. H. Valteau, Gananoque, Ont.; Manager, H. W. Cooper, Gananoque, Ont.; other directors, B. R. Hepburn and D. A. Valteau.

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

	1915		1914	
	Receipts	City percentage	Receipts	City percentage
Jan. ...	\$ 471,226	\$ 70,486	\$ 501,844	\$ 75,277
Feb. ...	440,314	67,047	461,274	72,060
Mar. ...	488,468	93,141	530,751	102,150
Apr. ...	467,702	93,540	501,435	100,287
May ...	468,953	93,790	534,465	106,893
June ...	450,582	90,116	525,033	105,106
July ...	449,086	88,821	495,882	103,772
Aug. ...	447,968	89,953	497,912	101,582
	\$3,684,200	\$686,534	\$4,058,596	\$767,127

**Air compressor outfit for Toronto Civic Railway.**—Tenders were received recently for equipment for the Danforth Ave. car barn and the Commissioner of Works recommended that the Canadian Westinghouse Co.'s tender for an air compressor outfit set complete with motor, making enclosed unit, for \$763 be accepted. He said that it was not the lowest tender but that after careful consideration of the other machines tendered he was of opinion that the Westinghouse would give the best service. The Board of Control accepted the tender.

## Toronto Railway's Proposed Extension on North Yonge Street, Toronto.

The Ontario Railway and Municipal Board gave judgment, Sept. 11, on the application of the Toronto Ry. for permission to extend its tracks from the present terminus on Yonge St., through the subway under the C.P.R., to Farnham Ave., the terminus of the Toronto and York Radial Ry.'s Metropolitan Division. Until recently the greater portion of this piece of roadway was operated over by the Toronto and York Radial Ry., and the Toronto Ry. claims that on the expiry, on June 25, of the franchise under which the operation took place, it had the right to extend its tracks under the agreement with the city in 1891. Pending the settlement of this point, the Toronto Ry. offered to operate, or arrange for the operation of cars to make the connection between its line and its subsidiary, the T. & Y. R. R., but the city prevented such an arrangement being arrived at by removing the rails and overhead equipment, thus leaving passengers to walk between the two termini. One of the chief objections urged by the city against granting the company's application, was that the company had not kept its agreement with the city to obtain the approval of the City Engineer to the plans. The Commissioner of Works admitted having received the plans from the company, but stated that they were addressed "for the approval of the city," and had been sent to the Board of Control, and that therefore they had not formally been sent to the City Engineer for his approval.

In delivering judgment, D. M. McIntyre, K. C., Chairman of the Board, said:—"This objection is at best highly technical, and a somewhat refined attempt to defend what seems to the Board to be an intentional evasion by the City Engineer of his clear duty under the agreement. Here is a contract between the city and company extending in duration over a period of 30 years; it presupposes a genuine intention on the part of each of the contracting parties to cooperate in the elaboration of a street railway system in the City of Toronto and provides machinery and agencies for carrying out that intention, under it slightly over 120 miles of tracks have been constructed, plans of all of which have presumably, under the procedure fixed by paragraph 12, been submitted for his approval to the City Engineer and yet when plans proposing a further extension are submitted to him by the company he shuts his eyes to the plain and obvious meaning of the transaction and fastens upon a phrase in the covering letter as a pretext for evading his clear duty under the agreement. It thus appears that the Commissioner of Works chose to take his stand upon a verbal quibble, ignoring the clear intent and purpose of the company in the transaction and abdicating his functions as city engineer under paragraph 12. The Board finds as a fact that the plans of the extension of the Toronto Ry., showing the proposed position of the rails, the style of rail to be used and the other works in the portion of Yonge St. in question have been duly submitted to the City Engineer as required by paragraph 12 above set out, and that he, in breach of his duty in the premises has neglected to consider the said plans and to approve or otherwise deal with the same thereunder.

"A number of persons were present at the hearing whose testimony was taken. They included persons living in Toronto north of the C.P.R., and residents of County York. All concurred that the absence of railway communication on Yonge St. between the

northerly terminus of the applicant's railway and the southerly terminus of the Toronto and York Radial Ry. was the cause of great inconvenience to thousands of people. Estimates were given that from 10,000 to 15,000 people daily walked between these termini, those northbound being obliged to climb a steep hill. All witnesses concurred that the construction and operation of the proposed extension of the Toronto Ry. would furnish a needed means of transportation and greatly lessen the inconvenience now suffered daily by thousands of people. The members of the board and its engineers have by personal inspection obtained confirmation of the concurrent testimony above summarized. The board finds as a fact that the equipment, appliances and service of the Toronto Ry. in respect to the transportation of persons along the portion of Yonge St. shown on the plans filed are inadequate, and the board is of the opinion that the Toronto Ry. should be required to construct, maintain and operate an extension of its existing lines northerly on Yonge St. with facilities to Y at Woodlawn Ave., as shown on the plans filed, and the board will so order."

The Board on Sept. 21, issued the formal order directing the Toronto Ry. to extend its track from the present terminus on Yonge St., through the subway to Farnham Ave., the terminus of the Toronto and York Radial Ry., and to have cars running on this section by Dec. 1.

The City Board of Control announced its intention of appealing against the judgment and the Mayor stated recently that he considered steps should be taken to obtain legislation to remove the City of Toronto from the Ontario Railway and Municipal Board's jurisdiction. The appeal was heard by the Ontario Court of Appeal, Sept. 27, and was dismissed with costs.

### Electric Railway Notes.

Toronto Ry. employes at the front number 251, of whom 105 are married men.

Commissioner Harrison has recommended the Edmonton, Alberta, City Council to abandon the straight 5c. fare on the Edmonton Radial Ry., and restore the old rate of 6 tickets for 25c.

The Manitoba Public Utilities Commission has ordered the Winnipeg, Selkirk and Lake Winnipeg Ry. to build a shelter at McNaughton, and to provide platforms at the Old Folks' Home, Middlechurch, and at the stop at Murray.

Regina, Sask., ratepayers are being asked to vote on the question of stopping cars being operated on the municipal railway on Sundays. The Sunday cars are being operated at a loss, and it is desired to cut the loss in operation to a minimum by reducing the service on this one day.

All sorts of suggestions are being made to the Edmonton, Alberta, City Council with the object of increasing patronage on the Edmonton Radial Ry. One of the most recent ones is a proposal to allow storekeepers to give tickets as a premium to customers on bargain days. This could only be done by restoring the ticket system on the line.

The Toronto and York Radial Ry. discontinued the sale of commutation tickets of 30 trips between its Toronto terminus and Long Branch, New Toronto and the Humber, Sept. 6. In place of this series, the company is issuing tickets as follows,—

to stop 10, 8 for 25c., stop 25, 7 for 25c., and stop 29, 5 for 25c. In response to a deputation of Long Branch residents, who waited on the management, Sept. 14, it was stated that until the City of Toronto came to some arrangement with the company regarding the operation of the line to the Humber, the company could not enter into any agreement with Etobicoke Tp. respecting fares. The deputation desired the fixing of the rate for tickets at 6, instead of 5, for 25c.

### Mainly About Electric Railway People.

J. H. Moir is reported to have been appointed Traffic Manager, Edmonton Radial Ry., Edmonton, Alta.

A. G. Workman has been appointed Chief Dispatcher, British Columbia Electric Ry., New Westminster, B. C., vice T. G. Connon resigned.

M. E. Morton, Traffic Manager, Fort William Electric Ry., has been appointed by the Ontario Railway and Municipal Board as an official examiner of motormen.

H. W. Cooper, heretofore Secretary-Treasurer, Oshawa Ry., Gananoque, Ont., has been appointed Manager, vice J. F. Chapman deceased, and J. H. Valteau has been appointed Secretary-Treasurer.

A. K. Bunnell, City Treasurer of Brantford, Ont., and a member of the commission managing the Brantford Municipal Ry., was elected President of the Ontario Municipal Association, at the annual meeting in Toronto, Sept. 2.

W. J. Radford, heretofore Cashier, Toronto Suburban Ry., West Toronto, Ont., has been appointed Assistant Manager. Robert Gilbert, heretofore Assistant Manager and Purchasing Agent, has been appointed Purchasing Agent.

John Knox, Treasurer, Dominion Power and Transmission Co., which owns and operates the street railway at Hamilton, Ont., and the various radial railways in that district, died there, Aug. 31. He was a native of Scotland, and resided in Hamilton for 32 years.

J. H. Trimmingham, Superintendent of Power, Sherbrooke Railway and Power Co., Sherbrooke, Que., is acting as General Superintendent during the absence of Major N. C. Pilcher, General Manager, who has gone overseas with the 5th Canadian Mounted Rifles.

Several changes have been made in the Chatham, Wallaceburg and Lake Erie Ry.'s organization. W. Norris, heretofore General Manager, Chief Engineer and Purchasing Agent, is now General Superintendent. J. E. Richards, General Freight and Passenger Agent, has resigned, and A. C. Johnstone has been appointed Accountant.

William John Radford, who has been appointed Assistant to General Manager, Toronto Suburban Ry., Toronto, was born at Boldre, Hants., England, Dec. 23, 1870, and entered railway service with the Great Southern and Western Ry. of Ireland, Jan. 12, 1890, since when he has been, to Feb. 28, 1894, junior clerk, Goods Manager's Office, Dublin; Mar. 1, 1894, to Dec. 12, 1899, station agent, Carlow; Dec. 3, 1899, to May 29, 1902, station agent, Athy; May 30, 1902, to Aug. 13, 1903, station agent, Charleville; Aug. 14, 1903, to Sept. 1, 1904, station agent, Killarney; Sept. 2, 1904, to Dec. 31, 1905, chief staff clerk, General Manager's Office, Dublin; Jan. 1, 1906, to Feb. 28, 1907, English Agent, Liverpool; Mar. 1, 1907, to Aug. 31, 1913, District Agent and Harbor Master, Rosslare, Ireland; Mar. 4, 1913, to June 30, 1915, cashier and office assistant, Toronto Suburban Ry., Toronto.

# Marine Department

## Loss of the s.s. Silver Wings.

The enquiry into the causes which led to the stranding and subsequent loss of the Wind Steamship Co.'s s.s. Silver Wings, on or near Sable Island, Aug. 17, was held at Halifax, N.S., recently, before Lieut.-Commander G. Holloway, R. N. R., acting Wreck Commissioner, assisted by Capt. N. Hall and D. C. Stewart as nautical assessors. Following is an abstract of the judgment:—

The court finds that the loss was caused by the stranding on or about the western end of Sable Island during thick weather. The Silver Wings left New York Aug. 14, with rails, etc., in holds, and two tiers on decks bound for Archangel, Russia. The master did not have his compasses adjusted to ascertain if the steel rails had affected them. From the evidence, even when he had cleared, the weather was clear enough to have swung his ship but he only obtained the deviation on his then course being steered, and again on the afternoon of Aug. 14 he obtained the deviation and on the morning of Aug. 15. Though by the evidence given, he had plenty of time after the stranding to save his deviation book, scrap log book and chart he was working with, they were not produced in court. As the master or mate were unable to inform the court what deviation they had on easterly courses before loading rails the court is unable to state if the compasses had been affected by the carrying of steel rails on deck.

After shaping course on leaving Ambrose light vessel to the time of stranding the weather appears to have been thick with a few clears, yet no soundings were taken, though the ship was constantly in soundings, and even though he steered to pass Fire Island vessel and Nantucket light vessel he did not hear the fog whistle, and changed his course without sounding. The master stated he used the small scale chart of the North Atlantic western portion. At the court he was given a large scale chart and asked to lay down his courses and distances from the data given in the log book. When these were plotted off, instead of taking the ship 45 miles to s. e. of Sable Island, his position placed the ship as really heading for Sable Island at 8 p.m. on Aug. 17, 3½ hours before she stranded, and again at 9 p.m. the ship was hauled to the southward some two points. The master was asked by the court what these manoeuvres were for and stated "I altered because I had so much fog and had read so much of steamers bound from New York to Archangel ramming fishermen. The court on laying down the course as shown by the log book and in applying the correct variation, places the position of the ship some 60 miles to the north and west of stranding position.

The court is unable to understand why he should deem it advisable to haul out twice in the course of one hour to go to the southward of Virgin Rocks, some 400 to 500 miles off. The master gave his evidence clearly and was obviously a man of ability, and the court can only conclude from the evidence given and the log book, that the master laid his first course in error and from then on shaped his course without referring to the chart, otherwise he must have seen his course took him 15 miles inside Nantucket light vessel instead of to the south. It has not been made plain upon what method of navigation the master was working, as his assumed position and position as shown by

courses laid in the chart are contradictory. We find the master in default for not using the lead and for reckless navigation and therefore suspend his certificate for one year from Aug. 30, but recommend that he be granted a mate's certificate during the period under suspension. The mate, Thomas Jones, kept his log in a very slack manner, only the compass course being shown; he also, from his evidence, showed he took not the slightest interest in the navigation and took over his watch without checking off the ship's position, and we find him in default for not realizing the responsibility of his position as mate and therefore suspend his master's certificate for three months, from Aug. 30, to Nov. 30, without the option of a lower grade certificate being issued.

The court feel called upon to comment upon the following facts: the Silver Wings left the United Kingdom with only the master and mate holding certificates. When the second mate left, shortly before the ship sailed, the boatswain was made chief boatswain, (the court does not realize what this term implies), and kept watch. The owners, according to the master's evidence, did not detain the ship for even a day to endeavor to obtain a second mate nor did they send a man out as passenger to catch the ship in New York. The court hazards the opinion that if the two officers had been carried, at least one of them would have realized that his position carried great responsibility and he was not put on the bridge as a figure head, but the court must point out that legally, for her tonnage, she had the full complement and the master and mate are alone to blame. The court finds that the type of log book as kept on the Silver Wings is not of a class to make the proper entries of ordinary navigation and would recommend that uniform log books be issued by steamship owners where by proper entries would be made.

## The Allan Line s.s. Hesperian Sunk.

The Allan Line s. s. Hesperian was struck, supposedly by a torpedo from a German submarine, Sept. 4, while outward bound from Liverpool, Eng., for Montreal. The passengers and a majority of the crew were removed, and an effort was made to tow her to Queenstown, Ireland, but she sank on Sept. 6. The loss of life has been given as 32, of whom 22 belonged to the crew.

The Hesperian was built at Glasgow, Scotland, and launched at the end of 1907. She was a sister vessel of the same company's s. s. Grampian, and was built to the highest class of the British Corporation for the Survey and Registry of Shipping, on the cellular double bottom principle, and specially strengthened for North Atlantic service. There was passenger accommodation for 500 first and second class passengers and for 1,400 third class passengers, the latter in four berth cabins. All the rooms were tastefully decorated, large dining rooms and music rooms being provided for each class. Electric light was supplied from duplicate plants, so that lighting was assured, and the thermo-tank system of heating and ventilation was installed. She was equipped with a double set of triple expansion engines supplied with steam by boilers operated under forced draught. Her dimensions were, length 502 ft., breadth 60 ft., depth to shelter deck 41½ ft., gross register tonnage about 10,000. She was placed

in service on the opening of the St. Lawrence navigation season of 1908, running between Glasgow and Montreal, completing the run within seven days.

## Navigation Aids on the Great Lakes and River St. Lawrence.

All Canadian lights and fog alarms on Lake Superior will be kept in operation this autumn until the close of navigation, with the exception of those at Caribou Island, Otter Island, Michipicoten Island east end, Gargantau, Michipicoten harbor, Corbeil Point and Ile Parisienne, from which stations the keepers may be removed at any time after Dec. 1. Mariners must not rely on finding any of these lights in operation after that date.

All Canadian lights and fog alarms on Lake Huron, Georgian Bay, Lake St. Clair, Lake Erie, Lake Ontario and connecting waters, will be kept in operation until the close of navigation, excepting the southeast shoal lightship, Lake Erie, which may be forced to abandon her station by ice conditions before the general close of navigation, and also Lonely Island light, Georgian Bay, which may be closed before the general close of navigation.

All Canadian lights on the River St. Lawrence will be kept in operation until the close of navigation. All gas buoys and other floating aids to navigation will be kept as long as ice conditions will permit, and in cases where it is necessary to remove gas buoys before the close of navigation, spar markers will be laid down if possible.

Lightkeepers and mariners will govern themselves accordingly. Lightkeepers are also cautioned to maintain their lights and fog alarms in operation until navigation shall have completely closed, and they are required to satisfy themselves that it has before closing their stations. The keepers of the stations named above will maintain their lights until called for by the Marine Department's steamship.

**Shipping Grain Overseas.**—It was announced in Ottawa, Sept. 22, that the Dominion Government had appointed a sub-committee under the Minister of Trade and Commerce, to deal with the question of shipping grain from Canada. W. Sanford Evans, Secretary of the committee, after enquiring into the situation at Montreal, is reported to have stated on Sept. 21 there were 33 ocean going vessels loading, ready to load, or waiting cargoes there. According to present indications there should be no congestion at Atlantic ports for some time to come, and probably not at all during the winter. Great Britain requires about 12,000,000 bush. a month, and if it can be arranged that the crop be marketed gradually, without rushing, the transportation question can be satisfactorily dealt with.

**Suspension of Coasting Laws.**—There have been persistent rumors for some weeks past that the Dominion Government would suspend the coasting laws so as to permit United States vessels to carry grain from Fort William and Port Arthur to other Canadian ports, a privilege which Canadian vessels have never been given between U.S. ports. Our advices from Ottawa up to September 23 are to the effect that the Government has no such intention.

**Mainly About Marine People.**

**Capt. Walsh**, Marine Superintendent, Atlantic Steamships, C.P.R., addressed the Sailors' Club, Montreal, recently, on the responsible part played in the war by the mercantile marine.

**W. G. Ross**, Chairman, Montreal Harbor Commissioners, was elected First Vice President of the American Association of Port Authorities, at the association's annual convention at Los Angeles, Cal., recently.

**Capt. H. I. Matthews**, who died at Colborne, Ont., Sept. 16, after an illness lasting several weeks, was formerly a master mariner on the Great Lakes, but had not been intimately associated with lake transportation for 30 years.

**Lieutenant-Engineer A. Gordon**, formerly a chief engineer on one of the vessels of the C.P.R. British Columbia Service, is reported to have been awarded the Russian Imperial Order of St. Anne, third class, for services on H. M. S. Jupiter, while engaged on the White Sea.

**James Carruthers**, President, Canada Steamship Lines Ltd., has contributed \$100,000 to the Military Hospitals Commission Disablement Fund, for the supplementing of pensions granted by the Government where these are deemed to be insufficient, and for special purposes.

**Capt. John Manson**, keeper of the Colchester Reef lighthouse in Lake Erie for the last 26 years, died at Amherstburg, Sept. 20, aged 75. He was engaged on sailing vessels for a number of years, and prior to being given charge of the lighthouse, was on the old lightship Dunscomb, stationed at Bar Point.

**Wm. McGuinness**, heretofore in the Liverpool, Eng., office of Allan Bros. and Co. of United Kingdom Ltd., has been appointed Manager of that company's office in Glasgow, Scotland, vice W. McK. Rodan, General Passenger Agent Allan Line Steamship Co., and Glasgow Manager Allan Bros. and Co. of U. K., who has returned to London, Eng.

**C. A. Jaques**, who was formerly interested in marine affairs, in connection with the Merchants Montreal Line, the C. A. Jaques Transportation Co., etc., has, in conjunction with A. M. and F. H. Jaques, incorporated Everyman's Car Co. Ltd., with \$40,000 capital and office at Ottawa, Ont., to manufacture and deal in motor cars and similar vehicles.

**R. A. Spawton** has not been appointed Purchasing Agent of the Marine & Fisheries Department at Halifax as reported in the daily press, and we are informed that no such appointment is contemplated. He has been a clerk at the Halifax agency for a number of years, and has been entrusted recently with purchasing such local supplies as the agency may require from time to time.

**Capt. P. M. Campbell**, who died at Collingwood, Ont., Sept. 10, aged 69, was a native of the Maritime Provinces, and had commanded vessels on the Great Lakes since the early sixties. He was one of the founders of the Georgian Bay Navigation Co., the name of which was changed in 1880 to Great Northern Transit Co. This company was amalgamated with the North Shore Navigation Co. in 1899, under the name of the Northern Navigation Co. of Ontario, and is now a subsidiary of Canada Steamship Lines Ltd. He was also one of the founders of the Collingwood Drydock Co., now the Collingwood Shipbuilding Co., of which he was a director at the time of his death. One of his sons, Capt. A. L. Campbell, is in command of the Northern Navigation Co.'s s. s. Huronic.

**Atlantic and Pacific Ocean Marine.**

The contract for the repair of the s.s. Hendon Hall which was wrecked in Trinity Bay, in Nov., 1914, has been awarded to the Davie Shipbuilding Co., Levis, Que.

The s.s. Bengore Head, which was damaged in collision with the s.s. Batiscan, early in August, and taken to the Davie dry dock at St. Joseph de Levis for repairs, was finished and discharged from the dock, Sept. 9.

The U. S. s.s. Allaguasha, bound from Copenhagen, Denmark, for New York in ballast, put in at St. John's, Nfld., Sept. 12, for temporary repairs, after a collision with the Parrsboro, N.S., barque Ravenscourt, 20 miles from Cape Race, Sept. 10.

A steamship named Iceland, intended for the Newfoundland sealing industry, was launched in Scotland recently, and it is announced that she may be taken over by the Russian Government for ice-breaking service at Archangel, instead of crossing to Newfoundland.

The Allan Line s.s. Pretorian, which collided with the s.s. Kansan, off the mouth of the Saguenay River, in the St. Lawrence, Sept. 15, arrived at Montreal, Sept. 17, under her own steam. After discharging passengers, mails, etc., she was dry-docked for examination and repairs.

The France and Canada Steamship Co., Ltd., has been incorporated under the Dominion Companies Act with \$1,000,000 capital and office at Montreal, to carry on a general steamship business between Canada and France, and to own and operate steam and other vessels in connection therewith.

The Maskinonge Steamship Co., Ltd., and the Laurentian Steamship Co., Ltd., have been registered in Liverpool, England, to take over certain steamships from Bowring and Co., together with certain contracts between that firm and the Dominion Coal Co. The first named company has a capital of £20,000, and takes over the s.s. Maskinonge, and the latter company has £75,000 capital, and takes over the s.s. Batiscan and s.s. Kamouraska.

The Ulster Steamship Co., owning the s.s. Bengore Head, has served a writ on the owners of the s.s. Batiscan, under charter to the Dominion Coal Co., for \$150,000 damages sustained when the two vessels collided in the St. Lawrence recently. It is reported that the owners of the Batiscan intend suing the Bengore Head owners for \$50,000. At the recent investigation into the causes of the accident the judgment of the Dominion Wreck Commissioner, which is given in this issue on another page, held that the Batiscan was solely to blame.

The Federal District Court at New York City, recently authorized P. A. S. Franklin, receiver for the International Mercantile Marine Co., to pay \$5,250,000 for five steamships owned by the Pacific Mail Steamship Co., operating on the Pacific. The vessels were bought for the Atlantic Transport Line, a subsidiary of the International Mercantile Marine Co. Following are particulars regarding them:—

Name.	Built.	Gross tons.	Cost.	Selling price.
China	1889	5,060	\$ 800,000	\$ 250,000
Korea	1902	11,276	2,200,000	1,000,000
Manchuria	1904	13,369	2,600,000	1,500,000
Mongolia	1904	13,639	2,600,000	1,500,000
Siberia	1902	11,284	2,200,000	1,000,000

The Union Steamship Co., of New Zealand, is reported to have purchased the British s.s. Maritime, and it is said that she will be placed in service between Australasia and Canada. The s.s. Maritime was formerly the Norddeutscher Lloyd s.s. Schlesien, and after being captured by the British, she was condemned by the prize

court and sold to the Maritime Steamship Co., Liverpool, who renamed her Maritime. The price paid for the vessel at the prize court auction is reported as \$326,000, and the price paid by the Union Steamship Co. is said to be \$600,000.

**Maritime Provinces and Newfoundland.**

An order in council has been issued establishing a permanent harbor quay line at Halifax, N. S., beyond which wharves, piers, breakwaters, etc., shall not in future be built.

An explosion took place on board the Newfoundland schooner Hiawatha, at Halifax, N.S., Sept. 10, and three members of the crew died as a result of injuries received. The vessel was loaded with gasoline, valued at \$5,000, and as a result of the subsequent fire was, with about 30 ft. of the wharf, destroyed.

The Marine Department announces the removal, on or about Sept. 30, of the lightship maintained on Lurcher shoal, off Yarmouth, N. S., for repairs. During the absence of the vessel, the station will be marked by a combined gas and whistling buoy, painted red, and showing an occulting white light. It is anticipated that the vessel will be replaced on or about Nov. 1.

The Reid Newfoundland Co.'s s.s. Home, which has for some time been doing coastal work at Green Bay, has been placed on the Cabot Strait service temporarily, taking the place of the s.s. Bruce, which was sold to the Russian Government recently for icebreaking service at Archangel. The company has not as yet made any arrangements with regard to the permanent replacement of the Bruce.

The Public Works Department's District Engineer reports that the channel through the bar at the entrance to South Ingonish, N.S., was originally dredged to a width of 200 ft. and a depth of 14 ft., but it has gradually narrowed and shoaled. In 1909 a dredge was engaged in deepening the channel to 20 ft., and widening it to 180 ft., but the work was not completed, and at present a channel, not quite straight, with an average width of 130 ft. is available with the full depth of 20 ft. The channel is marked by three starboard and three port hand buoys.

**Province of Quebec Marine.**

Considerable progress has been made during the summer on the St. Charles River improvement works. It is expected that the dam above the locks will be completed by the close of navigation. Dredging on the new course of the river is proceeding actively. On the Louise embankment the area southeast of the locks is to be filled in and used as a freight yard. Quinlan & Robertson are the general contractors.

The Marine Department has established two pairs of day beacons to mark the channel in Lake St. Peter leading to the mouth of the Petite Yamachiche River. The Department has also announced that in order to obviate confusion between the Boucherville range lights and the Boucherville west range lights, the former, nos. 1439 to 1440, are now designated as Ile Grosbois range lights, and the latter, nos. 1447.4 and 1447.5, as Daigneault range lights.

A Montreal press report states that Canada Steamship Lines, Ltd., is guaranteeing to every employe, married or single, who enlists for service at the front, his position on his return, and will insure the lives of all married employes who enlist. The com-

pany is paying the dependents of employes who have enlisted, whether married or single, \$10 a month. It will also advance training fees to those who enlist in the aviation training corps.

**Ontario and the Great Lakes.**

The Public Works Department has dredged a channel to Port Darlington, to 14 ft. deep. Between the piers for 1,300 ft. there is a bottom width of 100 ft., the edge of the channel being 25 ft. from each pier. From the ends of the piers southerly the channel widens from 100 ft. to 210 ft. in about 250 ft.

W. Evans, John Dodds, J. B. Stewart and G. M. Arnold, Inspectors of Boilers and Machinery, under the Canada Shipping Act, for the port of Toronto, have also been appointed officers to superintend the measurement of ships there, in place of A. R. Stanbury, Measuring Surveyor since 1908, who has resigned.

The U. S. Survey reports the levels of the Great Lakes in feet above tidewater, for August, as follows,—Superior 602.41; Michigan and Huron 580.11; Erie 572.34; Ontario 245.43. As compared with the average August levels for the past ten years, Superior was 0.23 ft. below; Michigan and Huron 0.87 ft. below; Erie 0.32 ft. below and Ontario 1.21 ft. below. It was anticipated that during September, Superior would be 0.1 ft. higher; Michigan and Huron, 0.2 ft. lower, Erie 0.3 ft. lower and Ontario 0.4 ft. lower.

The Cadillac Steamship Co.'s s.s. Western Star, owned in Cleveland, Ohio, struck on Robertson rock, north of Clapperton Island, off Manitoulin Island, Sept. 24, and sank in about two hours. The four passengers and crew of 20 were all saved and taken to Little Current. It is stated that the vessel and cargo of 7,000 tons of coal for Little Current will probably be saved. The Western Star is a steel vessel, built at Wyandotte, Mich., in 1903, equipped with triple expansion engines 22 x 35 x 58 x 42 ins., supplied with steam by two Scotch boilers 13 x 11½ ft. at 170 lbs. under induced draught. Her dimensions are: Length, 416 ft.; breadth, 50 ft.; depth, 28 ft.; tonnage, 4,764 gross, 3,593 register.

The Canadian Stewart Co.'s steam tug J. C. Stewart, which arrived at Toronto re-

cently, for use in connection with the harbor development work there, was built at Ferrysburg, Mich. She is of steel throughout, with accommodation for the master in the wheel house on the top deck, and for a crew of 12 on the main deck. She is equipped with fore and aft compound engines with cylinders 14 and 30 ins. diam. by 24 ins. stroke, supplied with steam by a Scotch boiler 10 by 11 ft. at 150 lbs. The tug's dimensions are, length 81 ft. 9 ins., beam 20½ ft.

The Montreal Transportation Co.'s s. s. Fairmount is reported in a dispatch from Kingston, Jamaica, to have been abandoned as a total wreck on the Point of Flat Clays, near Acklin Island, Bahamas. The Fairmount was under charter to the Inter-American Steamship Co., and when wrecked was en route from Newport News, Va. to Cienfuegos, with coal. She was built at Newcastle, Eng., in 1903, and was of steel with triple expansion engines with cylinders 21 x 35 x 58 x 39 ins. stroke, of 1,200 i.h.p., supplied with steam by 2 Scotch boilers 14 ft. by 10 ft. 8 ins. at 180 lbs. Her dimensions were, length 248 ft. 6 ins., breadth 42 ft., depth 23 ft., tonnage, 1895 gross, 1184 register. Prior to entering the Atlantic and coasting trade this year, she was operated in the Great Lakes trade.

**Manitoba, Saskatchewan and Alberta.**

The steamboat Princess, operating between the Saskatchewan and Regina beaches at Regina, Sask., struck a pile at Saskatchewan Beach, Sept. 6, and sank in a few minutes, in about 6 ft. of water. It is stated that she will be raised and repaired to be ready for service next year.

C. F. Law, of Vancouver, B.C., who represents the interests of the Peace River Tramway and Navigation Co., with which D. A. Thomas, the British Government representative in this country regarding munitions, is closely associated, was in the Peace River District early in September, and when in Edmonton, Alta., is reported to have stated that work had been commenced on the construction of the first of three steamships for operation on the rivers and lakes north of Edmonton. Canadian Railway and Marine World has already given some details of this vessel. Of the two other vessels mentioned, one, it is stated,

will be run on the waterways below the Chutes, and the other, which will be the largest, is intended for the Mackenzie River.

**British Columbia and Pacific Coast.**

C. H. Nicholson, Manager, G.T. Pacific Coast Steamship Co., is reported to have stated that the company will operate in the Alaska trade next spring with the steamships Prince Rupert and Prince George.

The G.T. Pacific Coast Steamship Co.'s s.s. Prince Albert, which has been operating on a charter between San Francisco and Los Angeles for some time, has returned to the British Columbia coast service.

The first steamship repair to be undertaken in the Grand Trunk Pacific dry dock at Prince Rupert, was on the s.s. Delhi, which was wrecked on the Alaskan coast recently, and salvaged and towed to Prince Rupert by the tug Sea Lion.

The Shell Co., of California, Inc., proposes to build a wharf and dock on the foreshore of a portion of district lot 215, group 1, New Westminster District, B. C., and has deposited plans with the District Registrar of Titles at New Westminster.

It is reported that the Dominion Government will call for tenders shortly for the construction of a wharf and shed at Vancouver, 700 x 80 ft. wide. The building will be of structural steel and sheet metal on a concrete base. The approximate cost is mentioned as \$250,000.

The Public Works Department has dredged the channel at the mouth of the Pitt River between Douglas Island and the mainland, to 25 ft. depth at low tide, and to 300 ft. wide from the upper end of the cut to the lower end of Douglas Island, and 150 ft. from there to deep water in the Fraser River.

Ocean Fisheries, Ltd., has been incorporated under the British Columbia Companies Act, with \$200,000 capital and office at Victoria, to carry on a general fishing business, and in connection therewith to own and operate steam and other vessels of all kinds. The incorporators are R. T. Elliott, K.C., H. H. Shandley, S., and R. Balcom and A. R. Langley, Victoria, B.C.

The West Vancouver council is considering a proposal to purchase the West Vancouver Ferry Co., and to operate the property as a public utility. A press report states that the company has offered to sell to the municipality for \$8,000, the latter to assume all the indebtedness of the company. The company was organized in 1912, and has not been a financial success.

Reports advise that the channel at the mouth of the Fraser River is only 24 ft. deep, compared with 28 ft. last winter and spring. The cut for the channel which was completed about a year ago, gave a channel 400 ft. wide and 29 ft. deep. Since then the channel has narrowed to 300 ft. It is suggested that if the channel were widened on the south side at the outer end about 400 ft. and made about 200 ft. wide at the inside end, the current would run through the cut, which is about 3,000 ft. long, and carry the sand deposit into the gulf.

**Ocean Vessels for Grain.**—The Minister of Railways and Canals, when in Winnipeg, Sept. 10, is reported to have stated that he understood from the Premier that complete arrangements had been made for the transportation across the ocean of all the grain which offered during September, after which further arrangements would be made, the Admiralty releasing more vessels as they were required for that purpose.

**Sault Ste. Marie Canals Traffic.**

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

ARTICLES		CANADIAN CANAL	U. S. CANAL	TOTAL	
Copper.....	Eastbound	Short tons	2,012	13,952	15,964
Grain.....	"	Bushels	1,177,406	1,084,874	2,262,280
Building stone.....	"	Short tons			
Flour.....	"	Barrels	303,088	507,480	810,568
Iron ore.....	"	Short tons	481,509	7,388,520	7,865,029
Pig iron.....	"	"	2,550		2,550
Lumber.....	"	M. ft. b.m.	3,029	68,116	71,145
Wheat.....	"	Bushels	1,860,971	577,309	2,438,280
General merchandise.....	"	Short tons	17,122	23,788	40,910
Passengers.....	"	Number	4,531	4,719	9,250
Coal, hard.....	Westbound	Short tons	11,000	268,948	279,948
Coal, soft.....	"	"	73,090	1,697,922	1,771,012
Flour.....	"	Barrels			
Grain.....	"	Bushels			
Manufactured iron.....	"	Short tons	1,058	19,157	20,215
Iron ore.....	"	"			
Salt.....	"	Barrels	140	96,307	96,447
General merchandise.....	"	Short tons	45,385	160,518	205,903
Passengers.....	"	Number	4,619	4,738	9,357
<b>Summary.</b>					
Vessel passages.....		Number	551	2,668	3,219
Registered tonnage.....		Net	1,033,870	7,249,604	8,283,474
Freight—Eastbound.....		Short tons	618,257	7,630,980	8,249,237
—Westbound.....		"	130,553	2,160,991	2,291,544
Total freight.....		"	748,810	9,791,971	10,540,781



## The Batiscan-Bengore Head Collision.

The formal investigation was held at Quebec recently, into the causes of the collision between the steamships Batiscan and Bengore Head, off Cape Salmon in the River St. Lawrence, Aug. 1, before Capt. L. A. Demers, Dominion Wreck Commissioner, assisted by Capt. F. Nash and J. A. Murray, as nautical assessors. The following summing up and judgment were made by the Wreck Commissioner, and concurred in by Capt. F. Nash, Capt. J. A. Murray dissenting on the matter of sentences,—

With regard to the Bengore Head, it may be said that the testimony of the master and pilot was straightforward, and corroborated by both the scrap and officer's logs. A proper course was steered up to and after passing Morin Shoal. The various orders to the engine room, the sounding of one blast on the whistle, and porting slightly in order to pass further from the other ship which was sounding two blasts, prolonged blasts, were proper. The hard a-porting and putting of the engines full speed astern were done in the agony of the collision, and in view of the existing circumstances, if no signals were given indicating these evolutions, it is excusable.

Regarding the Batiscan a multitude of conflicting statements appear in the evidence of the master, especially in his cross examination, the scrap and officer's log books contradicting his deposition to a certain extent, or incidents were not properly entered. We cannot accept his version, as the evidence is contradictory and uncorroborated so far as the logs are concerned.

The court having carefully examined the evidence adduced, finds; That the Batiscan is alone to blame for the collision. The nature of the impact, the damage done, in view of the nature of the cargo on the Bengore Head, which was composed of articles which offered an almost solid wall, indicates beyond the shadow of a doubt, that the Batiscan had, at the time of the collision, some considerable way on her, which is contrary to the evidence of the master, who avers that his ship had sternway to the extent of two knots. His admission that he sounded several two prolonged blast signals prior to the collision, wishing to indicate to the oncoming vessel that his ship was still in the water, induces this court to say that this was a misleading movement, and a wrong signal to give when his ship still had headway. He also admitted that his telegraph remained at full speed, though his speed was less owing to the reduction of steam. Article 16 of the Rules of the Road, says that a steam vessel hearing apparently forward of her beam, the fog signal of a vessel, the position of which is not ascertained, shall, so far as the circumstances of the case admit, stop her engines and then navigate with caution until danger of collision is over. In this case it is apparent that this article was not carried out. As to the sounding of the blasts from each vessel there appears to be no contradiction, except as regards the sounding of the three blast signal by the Batiscan, only we cannot credit that the Bengore Head, after, according to the evidence of the witnesses, of the Batiscan crossing from port to starboard, to the extent of six points, would describe half a circle and come back partly across the bow of the Batiscan, and be struck where she was. We do not find anything in the evidence to indicate that the Bengore Head adopted a wrong movement. Her porting her helm prior to the collision was a proper operation, in view of the two blasts she was hearing from the other ves-

sel. We say that in view of the evidence adduced, we find that Capt. Green, who was, prior to and at the time of the collision, in gate with caution. Hence we suspend his full command of the Batiscan, did not navigate certificate no. 3566, for two years from Aug. 16, with the proviso that on Aug. 1, 1916, a certificate as first mate shall be given to him to be retained until the expiration of his suspension, Aug. 16, 1917. With respect to the pilot of the Batiscan, Jules Lachance, we claim that the collision is due to bad seamanship, and not to lack of local knowledge, and that the master had assumed the giving of the orders; but with the acquiescence of the pilot, who was consulted. Therefore we hold the pilot partly at fault, and fine him \$300, payable \$100 a month. The second officer, who acted subject to the instructions of the master and pilot, is held blameless.

With respect to the Bengore Head we have no criticisms to make as to the conduct of the master or officers, and therefore exonerate them from blame. We also exonerate the pilot, Alfred Raymond, of the Bengore Head, of any fault in bringing about the collision; but we regret to state that leaving his post at such a crucial moment, when his services were immediately needed by the master to beach the vessel, shows unreliability in the moment of danger. He has a clean record, and one which up to this, has been absolutely above reproach, and had others of the crew abandoned their posts, and been found on the Batiscan, we would have analysed his action less severely; but he was the only one. That nothing more serious happened to the Bengore Head whilst he was absent, does not lessen the degree to which he was at fault in this respect, and having pronounced him unreliable the court has no alternative but to cancel his license, which it hereby does. Counsel for the Bengore Head, F. E. Meredith, K. C., in his address to the court, criticized in a forcible manner the instructions, or sailing directions issued to the master of the Batiscan, Capt. Green, by the charterers, the Dominion Coal Co.; but after consideration this court has determined that it is beyond its jurisdiction to comment on such document, other than to say that it behoves those interested to unite and discuss the possibilities of formulating instructions which will leave no room for wrong interpretation.

Capt. J. A. Murray, in dissenting, wrote:

Although I quite concur in the main points of your decision, I would ask you to kindly reconsider the sentence passed on Capt. Green and Pilots Raymond and Lachance.

Might I suggest that you reconsider the total suspension of Pilot Raymond's certificate. When he left the bridge he was told the ship was sinking, and although we feel he ought to have stood by the Captain, he had been told the ship was sinking, the crew had been ordered to the boats, and he, I am sure, in his own mind, felt justified in trying to save his life. Moreover, he was man enough to admit he would not do the same thing again. Furthermore, his past record is excellent.

With reference to Captain Green, might I suggest that he be granted a mate's certificate in the interim.

With regard to Pilot Lachance, as far as the actual working of the ship, Captain Green seemed to be in full charge and as such, in my opinion, assumed all responsibility; and if you concur possibly a lighter sentence might meet his case.

## Grounding of the s.s. Romera.

An investigation was held at Montreal recently, into the causes of the stranding of the British s. s. Romera on the south shore of the River St. Lawrence, between Capes Dog and Salmon, Aug. 16, before Capt. L. A. Demers, Dominion Wreck Commissioner, and Capt. F. Nash and Jas. Black as nautical assessors.

The vessel, which is owned by the Glasgow United Shipping Co., was bound to Montreal from Boulogne, France, and took a pilot on board at Father Point. When in the vicinity of Red Island, the weather thickened with a mixture of fog and smoke. The master stated that although he had been three times in the St. Lawrence, this year, he was somewhat a stranger to the route. He had had the same pilot on each occasion and had found him reliable and attentive to his duties. He left all the shaping of the courses to the pilot. The pilot, Arthur Lachance, stated that he had been piloting for 28 years without an accident for which he had been found at fault. The only cause to which he could attribute the grounding, was that the tide, which was ebbing, must have had a tendency to draw the vessel ashore. The courses steered were the usual ones, and there was no possibility of taking a bearing, as the land was not seen.

The following judgment was delivered,—the court having carefully weighed the evidence finds the pilot, Arthur Lachance, alone to blame. We accept his statement that he steered his usual courses without, in this case, having regard to the state of the tide or current affecting his ship. He has had a considerable period of service, and a good record, and we shall not use severity, for what we consider an error of judgment on his part, and, therefore, we condemn him to pay a fine of \$100, by Oct. 1. We call his attention, and that of all pilots, to the fact that a safe course can be so considered only when all factors likely to cause ships to deviate, sensibly if not visibly, are taken into account. The fact that the master and second officer supposed the ship to be from 1 to 1¼ miles off Cape Dog when abeam; also that there was no anchorage ground in the immediate vicinity, and that the ship was being navigated slowly, the rules of the road being observed to the letter, induce us to deal with the pilot in a lenient manner. As the master and second officer were practically strangers in these waters, and had had the same pilot on three previous occasions, and found him reliable and attentive, it is quite natural to suppose that they relied on his statement that the ship was 1¼ miles off Cape Dog. We therefore exonerate both the master and second officer from all blame in connection with this casualty. The action of the master in putting his helm hard astarboard, and ordering his engines full speed ahead, to give further impetus to the ship so that she might answer her helm promptly, was proper under the circumstances.

The American Association of Port Authorities held its annual convention at Los Angeles, Cal., Sept. 16. The 1916 convention will be held at Montreal in September. W. G. Ross, Chairman, Montreal Harbor Commissioners, has been elected First Vice President of the association for the current year.

J. H. Welsford, the head of the Union Steamship Co. of British Columbia, and other shipowning companies, has given the use of his country home near Chester, Eng., as a hospital for wounded soldiers. The cost of equipment for the accommodation of 90 men has been paid by him.

### The Ontario Car Ferry Company's Car Ferry Ontario No. 2.

This vessel made her first trip on the route between Cobourg, Ont., and Rochester, N. Y., Sept. 16. A machinery trial trip took place at Toronto, Aug. 28, when a number of those interested in transportation had a couple of hours run on the lake at the invitation of the builders. It is not the company's intention to place her in regular service at present, the car ferry Ontario No. 1 remaining in service for the remainder of the passenger season, when Ontario No. 2 will take up the freight business for the winter and be fitted out for passenger service in the spring. In the meantime Ontario No. 1, will be taken off the route and thoroughly overhauled.

The Ontario No. 2, which is practically a sister vessel of the Ontario No. 1, was built

14 by 12 ft. fitted with forced draught, and carrying 180 lbs. of steam. A detailed description of the vessel was given in Canadian Railway and Marine World for April, 1914.

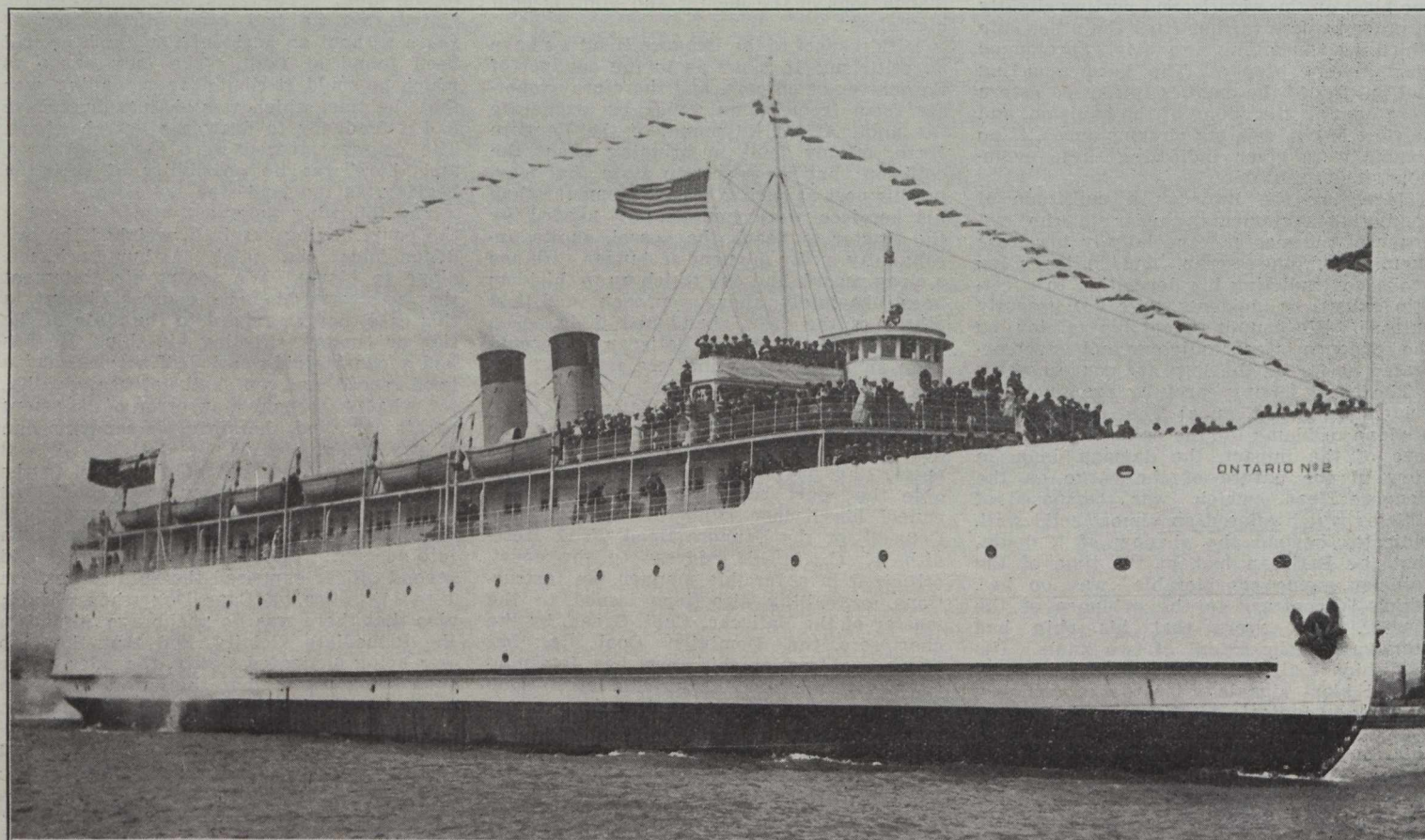
### The Loss of the s.s. Alexandria.

An investigation was held at Toronto, Aug. 30, by Capt. L. A. Demers, Dominion Wreck Commissioner, assisted by Capt. Jas. McMaugh and Jno. Williams, into the causes of the loss of Canada Steamship Lines s. s. Alexandria off Scarboro Bluffs, near Toronto, Aug. 3.

The master, Wm. Bloomfield, stated that he was bound from Port Hope to Toronto, and on leaving port the weather was thickening intermittently with a light wind astern and very little sea. Later in the day, the weather being misty, he changed his course to make

the starboard boats, and lines were fastened so that they could make shore and be brought back again; but this method was ineffective. The crew were rescued by the life saving crew there, and employes of the company, about 3 o'clock a.m., the ship having been exposed to the storm from about 5.30 the previous evening. The first officer corroborated the master as to weather conditions, and said that he left the master in charge of the steering when he received an order to jettison some of the cargo from the forward hold, to increase the draught aft, she being then 6 ins. by the head; but this was found ineffective. The wheelsman testified that the ship steered well in ordinary circumstances; but on this occasion, in view of the strength of the wind and seas she would not answer her helm and became absolutely unmanageable.

After carefully weighing the evidence ad-



The Ontario Car Ferry Company's Car Ferry Ontario No. 2.

by Polson Iron Works, Ltd., Toronto, and is of the shelter deck type, with four tracks on the main deck, which is of steel throughout without wood sheathing. The shelter deck is of steel laid flush, with a steel deck house running throughout its greatest length, with accommodation for passengers, officers and crew. The hull is divided by six water tight transverse bulkheads extending from the keel to the main deck with a longitudinal bulkhead along the centre line. The vessel has capacity for 28 loaded cars of 68 tons gross weight each, and 200 tons of fuel in the bunkers. The draught is 16¼ ft. when fully loaded, and the normal speed will be 13 miles an hour, but the machinery is capable of making 15 miles an hour on emergency. The propelling machinery consists of two triple expansion jet condensing engines with cylinders 20½, 33 and 54 ins. diam., by 36 ins. stroke, running at 110 r.p.m., and supplied with steam by four Scotch boilers

out the land and perceived he was in the vicinity of Frenchman's Bay, and hauled out on his former course. Shortly after a strong wind arose and the vessel became unmanageable. He tried to bring her towards the land, or to keep her away from the land, but she broached to, and the seas striking her, the anchor shutters were carried away and the water got into the gangways and the holds. When advised by the engineer that there was a certain quantity of water in the hold he attempted to make the land; but the ship would not answer her helm. The wind increased until it rose to a heavy gale, and the seas roughened rapidly, and therefore, knowing that his ship had been repaired, and was stronger at the stern than at the bow, he backed her to the shore, and finally grounded at Scarboro Bluff. At the time she grounded there were some 3 ft. of water in her hold, and the fires were put out shortly before. He gave orders to lower

duced, with respect to the navigation of the vessel, and the statements of witnesses regarding the strength of the wind on that afternoon, when it was proved that ships of stronger build than the Alexandria had to return to port in view of the wind conditions, which reached the velocity of a hurricane, the court finds that the master, in view of his idea of consideration for the lives of the crew under his care, and thinking he was justified in beaching his vessel owing to his being under the impression that if he went out further to sea his ship could not have stood the fury of the gale, and the seas, which had already done considerable damage, in fact to such an extent that she was making water, was not guilty of fault. The method adopted by the Master in beaching his vessel appears, on the face of it, a peculiar one; but owing to the conditions already mentioned as existing, the vessel could not be brought over to star-

board, would not answer her port helm. He pursued an unusual course of backing his vessel to the shore; which, however, appears to have been successfully performed. We may say that under the circumstances the fact that no lives were lost is providential. In view of the conditions prevailing at that time, the nature and build of the

vessel, her light draught, about 7½ ft., we exonerate the master from all blame with reference to the loss of his ship. As the mate did not take part in the operations, having been away from the bridge superintending the jettisoning of the cargo along with the rest of the crew, he is not held to blame in any way.

Canadian. The balance, 2,460,187 bush. was carried in Canadian steamships to Canadian ports. Receipts are coming in slowly for this time of the season, the reason for this being the bad weather that has prevailed all over the Northwest the last week. Conditions are improving and large receipts are looked for from now on. Dispatch in loading cannot be considered good as yet. Stocks are scattered and shippers are having difficulty in getting their cargoes together. As stocks increase dispatch will necessarily improve. The autumn rush cannot be considered to have begun, but by the last of the month these two ports should be taxed to their fullest capacity. Stocks in store, receipts and shipments during the week are:

	Stocks.	Receipts.	Shipments.
Wheat .....	2,983,871	3,900,292	2,875,167
Oats .....	147,059	87,520	66,281
Barley .....	242,073	168,948	135,906
Flax .....	994,815	3,208	.....

### Shipping Letters From the Head of the Great Lakes.

Sept. 11.—F. & W. Jones, shipping brokers, Port William, Ont., have written:—

Arrivals of coal at these ports are still very light, only seven cargoes being unloaded during the week, five bituminous and two anthracite—two were carried in United States steamships and five in Canadian. Two steamships are now at the docks and two are reported en route. Shipments of coal by car to the west is on the increase, but is by no means up to normal as yet. The Canadian Pacific Ry. has been receiving on company's service coal fairly steadily all through the season and, with its buyings from the western mines, has nearly enough to take care of its requirements for autumn and winter. Arrivals of C.P.R. on company's service coal will not amount to any large bulk. The National Transcontinental Ry. has also been receiving in large quantities the past few months and no heavy rush is looked for from that direction. Although the Canadian Northern Ry. has had a good run of o.c.s coal all the season its coal consumption this year will greatly exceed that of last year on account of its new line from Port Arthur east being put into operation this autumn. In all probability the fueling of all its eastbound trains will be done from Port Arthur, and any other point which may be opened as a fueling point will be served from these ports. Therefore it is quite likely that this road may still get in a quantity of coal.

One cargo of ore was shipped to Cleveland this week. No charters are reported for immediate loading. The total shipments of ore this year are approximately 60,000 tons; this was carried in 17 cargoes, three were in U. S. vessels and the balance in Canadian. There are approximately 25,000 tons

still to be shipped, the majority of this is now on the dock.

Sixteen cargoes of grain have gone east this week—two of these were in U. S. bottoms and billed to Buffalo. The total shipments this week were 851,853 bush. of all grains, compared with 449,831 bush. last week. New grain has commenced to arrive at a good rate, the approximate receipts of the new crop being: 1,880,000 bush. wheat, 90,000 bush. oats, 185,000 bush. barley. Stocks show a decided increase, being 3,275,637 bush. of all grains, as compared with 1,566,927 last week.

Several U. S. vessels are chartered to load grain at these ports during the coming week and there is no doubt that from now on the harbors will be very busy. The elevators have announced that after Sept. 15, until the close of navigation, they will work Sundays and nights, without charge to the vessel.

Sept. 18.—Coal arrivals show an increase and one anthracite. Dispatch in loadous and one anthracite. Despatch in loading is very good at all docks, all docks are working to capacity, although as yet no night work is being done, but it can be arranged when the necessity arises. Four steamships are en route, all bituminous. Car shipments to the west are about the same as at last writing, steady, but not up to the regular bulk usual at this time of the year.

No ore was shipped this week. One vessel is chartered, and will be at the dock early next week.

Grain shipments from the Canadian head of the lakes show a decided improvement. The total shipments are 3,106,453 bush. of all grains. Of this, 646,666 bush. went to Buffalo in three U. S. steamships and one

### Big Steamships and Economic Ocean Transportation.

A dozen years or more ago there was a great deal of discussion as to the rapid increase in the size of ships and its influence on economic freight carriage at sea. About that time J. J. Hill, President of the Great Northern Ry., gave a contract for the construction of two of the largest vessels ever built for freight carrying to run in Trans-Pacific service in connection with that railway. The end of that experiment has just been announced. One of those two huge vessels, the Dakota, was stranded after she was put into service, and became a wreck before she could be hauled off. The other, the Minnesota, after experiencing various vicissitudes, was continued in service and only recently was said to have transported across the Pacific the largest cargo of freight ever transported by a single ocean vessel. Notwithstanding this and the high rates for ocean freight now prevailing, it is announced that the railway company has decided to retire her from service and offer her for sale. While it is quite possible that the impending changes in the United States navigation laws may have something to do

### List of Steam Vessels Registered in Canada During August, 1915.

No.	Name	Port of Registry	Where and When Built	Length	Breadth	Depth	Gross Tons	Reg. Tons	Engines, Etc.	Owner or Managing Owner	
98579	Aranmore .....	Ottawa .....	Dundee, Scot'land..	1890	241 5	34 8	15 7	1,170	502	280 sc....	Minister of Marine and Fisheries, Ottawa, Ont.
125427	Canadian .....	Montreal .....	Newcastle, Eng....	1907	248 3	43 0	22 8	2,214	1,444	186 sc....	Canada Interlake Line, Ltd., Toronto
112356	Cecilia S. (a) .....	Brockville, Ont....	Buffalo, N.Y. ....	1875	95 6	13 6	8 7	33	33	33 sc....	J. H. Simpson, Brockville, Ont.
134461	Edith H. ....	Halifax, N.S. ....	Allandale, N.S. ....	1915	75 0	21 8	7 3	85	58	18 sc....	A. G. Heffer and J. H. Kelly, Halifax, N.S.
125443	Empress of Port William (b) .....	Montreal .....	Wallsend, Eng....	1908	250 0	43 0	22 3	2,181	1,383	205 sc....	Empress Transportation Co. of Midland, Ltd., Midland, Ont.
125428	Empress of Midland .....	" .....	" .....	1907	252 0	42 5	23 2	2,224	1,630	200 sc....	Inland Lines, Ltd., Hamilton, Ont.
134512	Jas. H. Shrigley .....	Sarnia, Ont. ....	Milwaukee, Wis....	1881	171 0	31 2	11 5	534	400	65 sc....	W. C. Thompson, Port Arthur, Ont.
137969	Katherine K. ....	Montreal .....	Montreal .....	1915	58 4	18 4	5 9	58	23	6 sc....	Quinlan & Robertson, Montreal
134206	Prince Edward Island .....	P.E.I. ....	Walker-on-Tyne..	1915	285 3	52 2	21 3	2,795	1,110	520 sc....	Minister of Railways and Canals, Ottawa, Ont.
94921	Robert McDonald (c) .....	Kingston, Ont....	Pictou, Ont. ....	1890	91 0	19 0	6 4	97	50	18 sc....	A. Sudds, M.O., Kingston, Ont.
134017	St. Ignace .....	Port Arthur, Ont..	Detroit, Mich....	1889	220 0	52 3	19 0	1,476	935	218 sc....	J. Whalen, Port Arthur, Ont.
134548	W. H. Lee .....	Ottawa .....	U.S. ....	1889	128 9	30 0	11 0	317	190	61 sc....	Minister of Naval Service, Ottawa, Ont.

(a) Formerly Orizaba.

(b) Formerly Mount Stephen.

(c) A recovered wreck

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

No.	Name	Port of Registry	Rig	Where and When Built	Length	Breadth	Depth	Reg. Tons	Owner or Managing Owner	
137965	B. L. Pennington .....	Montreal .....	Sloop .....	.....	239 8	38 3	14 3	1 168	Canada Steamship Lines, Ltd., Montreal	
137968	Brookdale (a) .....	.....	.....	West Bay City, Mich.	1888	213 1	39 0	16 3	1,165	
106784	Callidora .....	Sydney, N.S. ....	Bktn .....	Portmadoc, Scot. ....	1901	103 3	23 8	12 0	144	J. Rorke, Carbonear, Nfld.
137894	City of Sheboygan .....	Toronto .....	Schr. ....	Sheboygan, Wis....	1871	135 5	27 4	10 0	297	E. M. Macdonald, Toronto
131208	Gilbert Islands .....	Liverpool, N.S. ....	Schr. ....	Liverpool, N.S. ....	1915	119 8	30 9	11 6	245	A. W. Hendry, Liverpool, N.S.
137967	Manley & Co., No. 1 (b) .....	Montreal .....	Dredge .....	Buffalo, N.Y. ....	.....	75 4	26 3	5 0	148	M. McAuliff, J.O., Welland, Ont.
137876	Olive E. ....	Lunenburg, N.S. ....	Schr. ....	La Have, N.S. ....	1911	36 8	10 7	6 2	11	A. Naugler, Dayspring, N.S.

(a) Formerly Moravia.

(b) Formerly Dredge No. 4.

with this decision, it is also stated that the vessel has not proved the profitable carrier that was expected. The experienced ship owners of Great Britain and Germany, who doubtless understand the ocean transportation business better than the business men of any other nation, continue to build freight vessels of moderate size in order to earn profits. It is only on the route between New York and Europe, where high class passenger traffic is under competition, that vessels larger than 20,000 tons have ever been put in profitable service, and very few ships operated on any other route exceed 10,000 tons.—Engineering News.

**Telegraph, Telephone and Cable Matters.**

The Bell Telephone Co. of Canada has 123 of its employes enlisted for active service, the majority of whom are already in continental Europe.

W. E. Bell has been appointed acting chief assistant to the Manager of Telegraphs, G. T. R. and G. T. P. R., Montreal, during the absence on leave of A. P. Linnell, who has enlisted for active service in Europe.

**Among the Express Companies.**

A. W. Martin has been appointed agent, Canadian Northern Ex. Co., Port Arthur, Ont., vice J. W. McDonald, deceased.

W. F. Piller, agent, Canadian Northern Ex. Co., Edmonton, Alta., who has been on leave of absence for five months, has resumed his duties.

The Dominion Ex. Co. has opened offices at Breckenridge, Que., Castleton, Ont., and Coalmont and Renata, B. C., and has closed its offices at Glanworth and Port Stanley, Ont., and Port Simpson, B. C.

A press report states that the European representative of an American express company is in Petrograd, Russia, investigating the advisability of establishing an office there, with agencies in other parts of the country.

E. J. Wearing, Passenger Agent, G.T.R., Liverpool, England, has also been appointed acting General Agent, Canadian Ex. Co., there, succeeding W. Cuthbertson, General Agent, deceased, and has not been appointed General Assistant, as stated in our last issue.

The Canadian Ex. Co. has opened offices at Coldbrook, Kingsclear, Pokiok and Temple, N. B., Pictou Landing, N. S., St. Perpetue, Bridge, Hervey Jct., La Chat, La

Tuque, Monk, Rosaire, St. Adelpha, St. Malachie and St. Marc, Que., and Smithfield, Ont.

Canadian Ex. Co.'s statistics of operation for April show the following details:—Mileage of all lines covered, 9,676.50; charges for transportation, \$262,250; express privileges, \$123,579; operation other than transportation, \$5,559; total operating revenue, \$144,230; operating expenses, \$121,914; net operating revenue, \$22,315; express taxes, \$4,000; operating income, \$18,304.

**Transportation Conventions in 1915-16.**

- Oct. 4, 5.—American Association of Traveling Passenger Agents, Boston, Mass.
- Oct. 4-8.—American Electric Railway Association, San Francisco, Cal.
- Oct. 5-7.—Railway Fire Protection Association, Chicago, Ill.
- Oct. 10.—National Association of Railway Commissioners, San Francisco, Cal.
- Oct. 13.—Association of Water Line Accounting Officers, Washington, D.C.
- Oct. 13.—Railway Taxmen's Association, Chicago, Ill.
- Oct. 13-15.—American Association of Railway Surgeons, Chicago, Ill.
- Oct. 19-21.—Maintenance of Way and Master Painters' Association of the United States and Canada, St. Louis, Mo.
- Oct. 19-21.—American Railway Bridge and Building Association, Detroit, Mich.
- Oct. 19-21.—Society of Railway Financial Officers, Colorado Springs, Col.
- Oct. 21-23.—American Association of Dining Car Superintendents, Boston, Mass.
- Nov. 17.—American Railway Association, Chicago, Ill.
- Nov. 17-19.—International Association of Ticket Agents, New Orleans, La.
- Dec. 7-10.—American Society of Mechanical Engineers, New York, N.Y.
- Dec. 14.—Association of Transportation and Car Accounting Officers, St. Louis, Mo.
- Jan. 18-20, 1916.—American Wood Preservers' Association, Chicago, Ill.
- March 21-23, 1916.—American Railway Engineering Association, Atlantic City, N.J.
- May 2-5, 1916.—Air Brake Association, Atlanta, Ga.
- June 28, 1916.—Association of American Railway Accounting Officers, Detroit, Mich.

**Transportation Associations, Clubs, Etc.**

The names of persons given below are those of the secretaries unless otherwise stated:  
 Canadian Car Service Bureau—J. Reilly, Manager, 401 St. Nicholas Building, Montreal.  
 Canadian Electric Railway Association—Acton Burrows, 70 Bond Street, Toronto.  
 Canadian Freight Association (Eastern lines)—G. C. Ransom, Canadian Express Building, Montreal.  
 Canadian Freight Association (Western lines)—W. E. Campbell, 805 Boyd Block, Winnipeg.  
 Canadian Railway Club—J. Powell, St. Lambert, Que. Meetings at Montreal 2nd Tuesday each month, 8.30 p.m., except June, July, and August.

Canadian Society of Civil Engineers—C. H. McLeod, 176 Mansfield St., Montreal.  
 Canadian Ticket Agents' Association—E. de la Hooke, London, Ont.  
 Central Railway and Engineering Club of Canada—C. L. Worth, 409 Union Station, Toronto. Meetings at Toronto, 3rd Tuesday each month, except June, July, and August.  
 Dominion Marine Association—F. King, Counsel, Kingston, Ont.  
 Eastern Canadian Passenger Association—G. H. Webster, 54 Beaver Hall Hill, Montreal.  
 Engineers' Club of Montreal—R. W. H. Smith, 9 Beaver Hall Square, Montreal.  
 Engineers' Club of Toronto—R. B. Wolsey, 94 King Street West, Toronto.  
 Express Traffic Association of Canada—W. H. Burr, Chairman, Toronto.  
 Great Lakes and St. Lawrence River Rate Committee—James Morrison, Montreal.  
 Hydro-Electric Railway Association of Ontario, T. J. Hannigan, Guelph, Ont.  
 International Water Lines Passenger Association—M. R. Nelson, New York.  
 Niagara Frontier Summer Rate Committee—James Morrison, Montreal.  
 Nova Scotia Society of Engineers—A. R. McCleave, Halifax, N.S.  
 Quebec Transportation Club—A. F. Dion, Quebec.  
 Ship Masters' Association of Canada—Capt. E. Wells, 45 St. John Street, Halifax, N.S.  
 Toronto Transportation Club—W. A. Gray, 143 Yonge Street, Toronto.  
 Western Canada Railway Club—Louis Kon, Box 1707, Winnipeg. Meetings at Winnipeg, 2nd Monday each month, except June, July, and August.

**Tonnage on Welland and Panama Canals.**

A comparison of the tonnage and number of vessel passages on the Welland and Panama Canals, for a six months period, shows the following,—Welland Canal, 3,314 vessel passages; 3,484,327 total tonnage; Panama Canal, 496 vessel passages; 2,367,244 total tonnage. The average tonnage per vessel passage through the Welland Canal is 1,050, while that through the Panama Canal, is 4,770. On the completion of the Welland Ship Canal, vessels of a considerably larger type than can be used at present will be able to pass, of course with correspondingly larger cargoes, so that though a decrease in the number of vessel passages may be looked for, the average tonnage will doubtless be considerably increased.

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