ONTARIO NORTHLAND DIARY

CANADIAN TRANSPORTATION 1936-1960

C. H. RIFF

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following the inion Atlantic succeeded the operated over to Yarmouth, uro, 57 miles; miles; and the ship Line, bed Digby, N.S., Boston, Mass. en over is 50. Boston, Mass., estern Express

charged by the telegraph companies operating in and out of Winnipeg set aside, was heard.

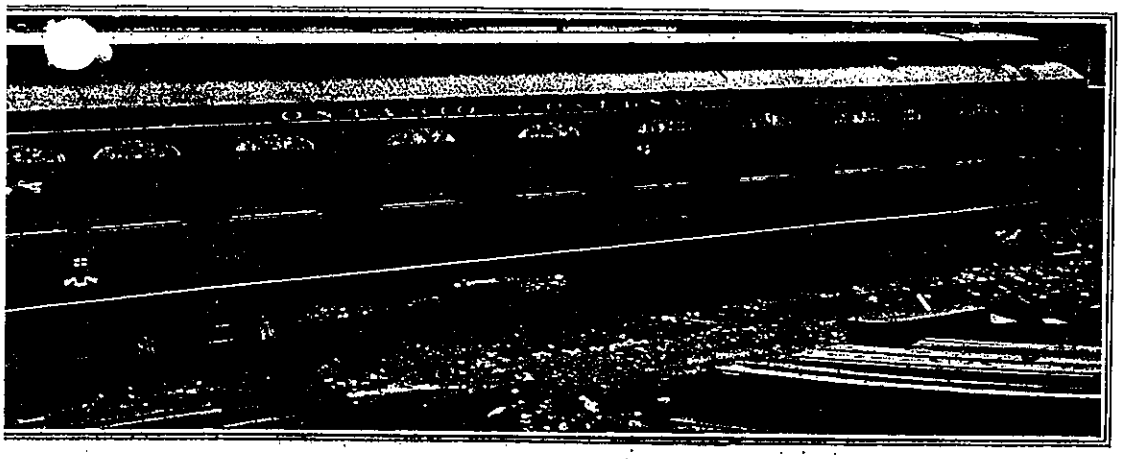
A. B. Smith, Manager G.T.P. telegraphs, while in Fort William, recently, is reported to have said, that the telegraph lines between Fort William and Winnipeg, and between Lake Superior Jct., and Winnipeg, were completed. The line is also being erected westward, concurrently with the construction of the railway.

The Dominion Government has a staff of engineers engaged in locating a route for a telegraph line along the Skeena River to Stewart on the Portland Canal. It is stated that this connection for Stewart will follow up the Kitsumkalum valley, across the Naas valley to Alice Arm, and from thence to the Portland Canal and Stewart.

The Board of Railway Commissioners has approved Tariff C.R.C. 1, the local tolls, of the Anglo-American Telegraph Co. The rate is 25c. for 10 words and 2c. for each additional word, between the company's offices in Prince Edward Island, and also between P.E.I. and New Brunswick. The rates for press messages are 25c. for 100 words, and ¼c. for every additional word.

We are officially advised that the Dominion Wireless Telegraph Service has been transferred from the Department of Marine to the Department of Naval Service. The officials of the telegraph

The Pacific Cable Board's report for the year ended Mar. 31, shows that 115,663 messages were dealt with against 103,812 in the previous year, the number of words being 1,356,135 against 1,225,048. One of the increases was in press messages, due to the decrease in rates, as a result of the negotiations of the Imperial Press Conference held in London, Eng., last year. The chief increase, however, was in ordinary messages, amounting to about 10%. The total receipts were £111,723, with a credit balance of £17,956. The traffic receipts show an increase of £403, but owing to transfer delays, £2,211, which should have been credited to 1909-10, has had to be included in the current year's accounts. The report states that difficulties, largely geographical and climatic, with the land lines in Canada, have been spoken of in previous reports, after full consideration, the Board has come to the conclusion that much could be done to minimize these if it had in its own hands the working of the line between Bamfield and Montreal. It has, accordingly, entered into an agreement with the C.P.R. for a lease, exclusively, for five years, of a line between these points, which the company is to maintain in good condition, while the Board provides the working staff and retains such portion of the tolls as have hitherto been paid to the C.P.R. This arrangement, it is claimed will have several advantages,



Temiskaming and Northern Ontario Railway Commissioners' Official Car.

over has been . Co.'s Atlantic R. Vickers is Superintend- F. W. Bransbeen placed in y, and he will T. R. McKen- A. R. agents at all stations, re F. Fennell, has taken re J. H. Greig n, N.B., where appointed, and an exclusive ied, charge ster. Co.'s s., been Masters.

Matters.

Telegraph Co. omer, Durban, Pleasant Point andian, Carles- id Pelly, Sask. rd of Railway Winnipeg, Sept.

service, are, C. P. Edwards, Superintendent of Radio-telegraph Service, Ottawa, and E. J. Haughton, District Superintendent of Radio-telegraph Service, Victoria, B.C. The latter has charge of the Pacific coast branch of the service, and reports to the Superintendent.

J. Kent, Manager C.P.R. telegraphs, and B. S. Jenkins, General Superintendent of Telegraphs, C.P.R. Western Lines, were in Vancouver recently, on an inspection trip. It was stated that the delay in the completion of the cable, which will improve the communication between Vancouver and Victoria, was due to manufacturers in the east being unable to ship material, owing to congestion of orders. It was, however, expected that the cable would be ready for operation by Oct. 1.

The Dominion Wireless Telegraph-Telephone Co., Ltd., has been incorporated under the Ontario Companies Act, with a capital of $40,000 and offices at Windsor, to deal in wireless telegraph and telephone instruments, to erect and operate wireless telegraph and telephone systems, and to conduct a general wireless telegraph and telephone business for hire. The provisional directors are:—J. Clark, A. Beckett, S. Anderson, Windsor;

keeping, at all times, a clear line for the Board's messages and allowing the adoption of the Continental system of operating, thus involving less risk of error in transmission than the American system.

Grain Elevator Notes.

The Brown Brothers Elevator Co., has been incorporated under the N.W.T. Companies Ordinance, with a capital of $10,000 and offices at Regina, Sask.

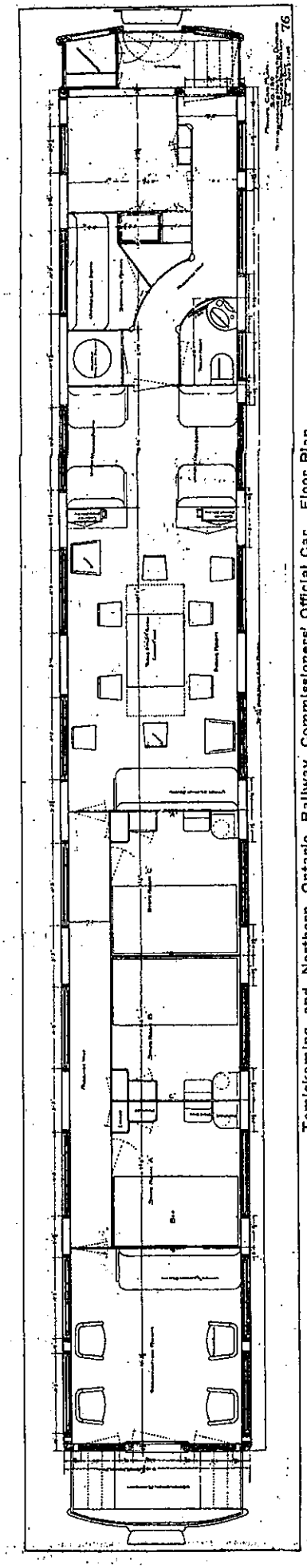
The Dominion Premier is reported to have stated, while on his western tour, that the Government would build an elevator at Prince Rupert, B.C.

The Alberta-Canadian Elevator Co. is reported to have leased a storehouse in New Westminster, B.C., while it is arranging to erect an elevator there.

The contract for the erection of a 200,000 bush. elevator at Sudbury, Ont., costing $135,000, is reported to have been placed with the Barnett and Record Co.

The Suplee Elevator Co., has been granted a license to do business in the province of Quebec, with its chief place of business at Montreal, and R. F. Ogilvie, as its principal agent.

October 1910



Temiskaming and Northern Ontario Railway Commissioners' Official Car. Floor Plan.

with chairs upholstered in green plush, and green leather in the smoking room. Each of the cars will have a library, free to the occupants, with the latest books, and the whole will be equipped with the most approved appliances for comfort and convenience.

The new dining cars which the G.T.R. has recently built at its Point St. Charles shops, for the International Limited, are equipped with six-wheel trucks, fitted with 38 in. Krupp steel tires and steel bolsters, steel platforms with standard wide vestibules, high speed air brakes and air signals, heated with straight steam from the locomotive and with cooking ranges. They are lighted by electricity, and the dining rooms are finished in African mahogany, with accommodation for 30 diners in each. The kitchens are equipped with the most improved devices for expeditious service, and special arrangements have been made for a supply of water under air pressure. Following are the chief dimensions:—

Length over end sills	70′ 7″
Length over buffers	78′ 7″
Extreme width	**10′ 1½″**
Extreme height	14′ 6⅛″
Total inside length	69′ 10″
Length of dining room	32′ 6″
Width of dining room	8′ 8″
Length of kitchen	15′ 10″
Width of kitchen	6′ 7″

The Intercolonial Ry. is building, at its Moncton shops, N.B., one stores car with steel underframe, made by the Canadian Car and Foundry Co., Montreal, and six cabooses, of which the following are the chief particulars:—

Stores Car.

Length over end sills	41′ 0″
Width over side sills	9′ 1⅝″
Height, top of sills to under side of plates	7′ 9″
Length inside	40′ 2⅜″
Width inside	8′ 6″
Outside of end sill to centre of body bolster	5′ 6″
Centre to centre of cross frame tie timber	9′ 0″
Height, top of rail to centre of drawbar	2′ 10½″
Wheel base of truck	5′ 6″
Door openings	3′ 0″
Distance between truck centres	30′ 0″
Underframes	Steel
Truck bolsters	Simplex
Journal boxes	McCord
Air brakes	Westinghouse

Six Cabooses.

Length over platform sills	35′ 6″
Length over nailing strips on end sills	30′ 0″
Width over nailing strips on side sills	9′ 0″
Height, top of nailing strips to under side of plates	6′ 8″
Length inside	29′ 6¼″
Width inside	8′ 6⅛″
Height inside, top of floor to under side of carlin	7′ 1¼″
Outside of end sill to centre of body bolster	5′ 0″
Centre to centre of cross frame braces	6′ 4″
Height, top of rail to centre of drawbar	2′ 10½″
Wheel base of truck	5′ 0″
Door opening, side	2′ 10″
Door opening, end	2′ 3″
Distance between truck centres	20′ 0″
Platforms	Standard Coupler Co.
Journal boxes	McCord
Air brakes	Westinghouse

The Temiskaming and Northern Ontario Ry. has added to its rolling stock a private car, named Sir James, which has been built by the Preston Car and Coach Co., Preston, Ont., for the use of the members of the Commission. It is unique, and is said to be the first of its kind, either built or used, in Canada. The underframe is entirely of steel, the centre member being a box girder, composed of two 20 in. channels, extending continuously from buffer beam to buffer beam, boxed top and bottom, with ½ in. by 20 in. steel. The draft gear is encased in the end of the box girder. On the side framing, which is of structural steel cased with wood, is a steel plate, extending continuously from end to end of the car, and from the outside sill to the sash stool. On the top of this is rivetted a compression member of ⅝ in. by 6 in. steel extending from end to end of the car body. There are no under

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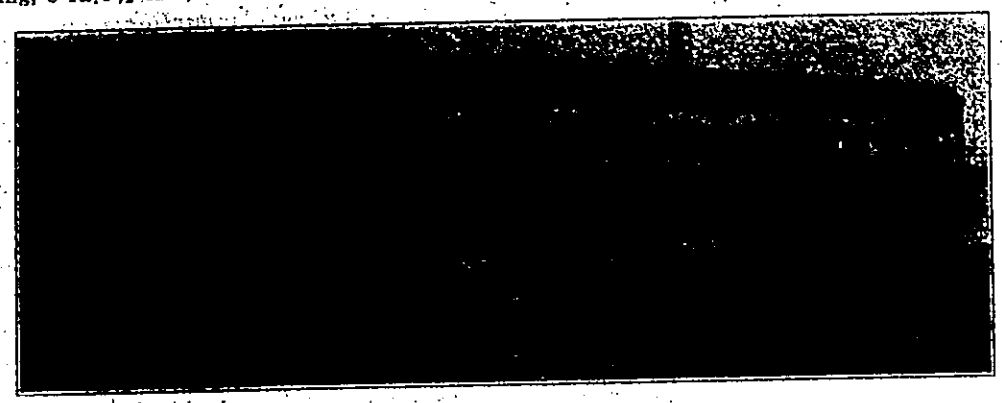
Electric Railway Department

Interurban Passenger Cars on Nipissing Central Railway.

The two interurban cars for the Nipissing Central Ry., which were described preliminarily in Canadian Railway and Marine World for June, have been delivered, and a floor plan and exterior of one of them are given herewith: They have a total seating capacity of 52 in the three compartments. Following are some of the principal dimensions: Length over buffer, 51 ft.; over vestibules, 50 ft.; over body, 40 ft.; centre to centre of trucks, 28 ft.; width over sheathing, 8 ft. 9½ ins.; aisle width, 1 ft. 10 ins.; height from rail to underside of side sills, 3 ft. 1 in.; height from rail over roof, 12 ft. 4 ins.; height from floor to top of window sill, 2 ft. 5 ins.; and height from vestibule platform to floor of car, 10 ins.



Exterior View of Interurban Car, Nipissing Central Railway.

The underframing is of steel throughout, comprising essentially two centre sills of 7 in. 17½ lb. I beams spaced 12½ in. centres, extending from end sill to end sill, with a ¼ in. cover plate top and bottom, extending from bolster to bolster, and two side sills of 6 by 3½ by 7-16 in. angles extending from end sill to end sill, with a 3-16 in. truss plate, 30 ins. deep, extending from end sill to the baggage door post, with the side sills under the baggage door reinforced by a 6 by ⅝ in. plate, 9 ft. long. Pine side sills resting on the short flange of the steel side sill, are bolted to the latter. The end sills are built up of a 9-by ⅜ in. steel plate, having a 6 by 3½ by 7-16 in. angle along the bottom outer face. The wooden end sills are of oak. The side and centre sills are tied with 4 in. 6¼ lb. channels at each side of each bolster, and braced diagonally each side of the bolster with 4 in. channels. There are 5 intermediate cross bearers of 4 in. 6¼ lb. channels, evenly spaced, and two crossbearers of 4 in. 7½ lb. I beams, located 4 ft. each side of the car centre line, extending beneath the sill.

The vestibule platform is dropped 10 ins. below the car level, the side sill knees being 3-16 in. plate 12 ins. deep at the end sill plate, reinforced top and bottom with 2 by 2 by ¼ in. angles, and secured to the underside of the sills. The centre sill knees are two 6 by 3½ by 7-16 in. angles, extending from the bumpers to 4 ft. back from the body bolster. The bumpers are 6 in. 8 lb. channels, bent to the contour of the vestibule end, and with the top bevelled back at 45 degrees and covered with sheet iron.

The flooring is of 1 by 2½ in. yellow pine, laid longitudinally with a special mat surface. The platform flooring is hard maple, ⅞ by 2½ in. The floor has trap doors. The body posts are of ash 2½ ins. thick. The car roof is of the single arch type, supported on 14 steel carlines, 1¾ by ½ in., with intermediate ash carlines at 10 in. centres. The roof boards are ½ in. thick, covered with no. 8 canvas.

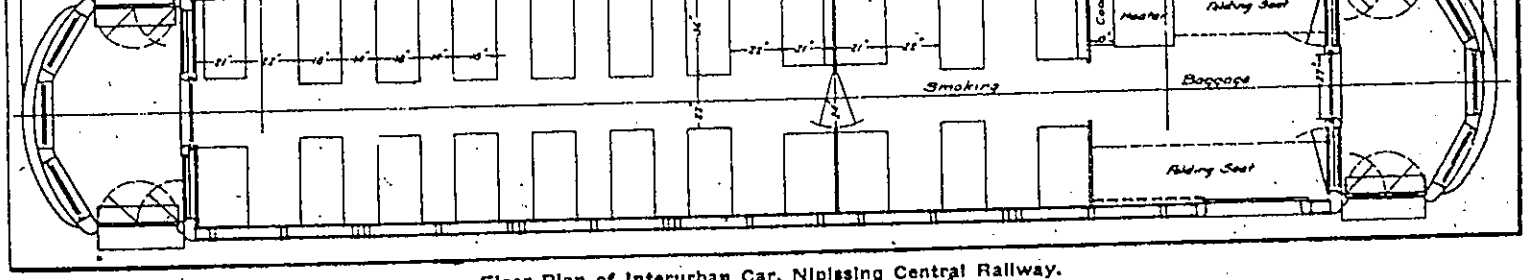
There is a 24 in. swinging door between the general and smoking compartments, and a single sliding door in each bulkhead. The vestibule doors are folding, in two parts, hinged against the bulkhead, and fitted with automatic folding apparatus. The car steps are 36 ins. wide, double at each door, the lower one with a 10 in. tread, and the upper one with a 9 in. tread, with 10 in. risers. There are 14 reversible seats, 36 ins. long, on a single pedestal and spring upholstered in rattan. There are also 8 stationary cross seats of similar construction, and two folding seats, one along each side of the baggage compartment.

The heating is provided for by a forced draught heater in the baggage compartment, and there are 10 ventilators, five on each side of the roof. The equipment also includes destination signs, signal bells, hand straps, fare register, arc headlight, signal whistles, etc. The car lighting is by two rows of pendant lights along the ceiling with a 3 lamp cluster in each vestibule.

The air brake equipment is the Westinghouse A.M.M. type, supplied by a D.I.E.G. compressor with a 600 volt motor. It has a type J governor, M. 15 D brake valves, B 6 feed valves, M 1 triple valve, a type R, 10 by 12 in. brake cylinder, B 3 conductor's valves and 3½ in. air gauges illuminated by a 6 volt lamp. There is also a geared hand brake equipment at each end of the car.

The trucks are Brill 27 M.C.B. type, with a 6½ ft. wheel base. The wheels are 33¼ ins. diam., steel tired with retaining rings, and with cast steel centres. The tires are 5 ins. wide by 3 ins. thick, and the axles have 4¼ by 8 in. journals. The motor equipment on these cars is the Westinghouse 306 double end control, with four motors, two on each truck, with a controller in each end of the car. The car is also equipped with an integrating wattmeter, rated at 600 volts, 400 amperes.

These two cars were built by the Preston Car and Coach Co., under order from the Timiskaming and Northern Ontario Ry. Commission, which also operates the N.C.R.



Floor Plan of Interurban Car, Nipissing Central Railway.

Saskatoon Municipal Ry. Operating Results.

The financial statement of the city of Saskatoon, Sask., for the ten months ended Oct. 31, contains the following, covering the operations of the municipal railway and of its extension to Sutherland, operated under an agreement with the council of that town:—

Saskatoon Municipal Railways.	
Cash fares	$73,468.13
Ticket sales	44,683.87
City departments	783.31
Chartered cars	269.55
Advertising	1,829.84
Rents	110.06
Miscellaneous	484.33
	$121,627.02

Superintendence of way and structures	$ 721.36	
Maintenance of way	3,021.73	
Maintenance of electric lines	964.73	
Maintenance of buildings and fixtures	496.57	$ 5,194.39
Superintendence of equipment	565.84	
Maintenance of cars and locomotives	3,890.52	
Maintenance of power equipment	60.64	
Maintenance of electrical equipment of cars and locomotives	1,370.30	
Miscellaneous equipment expenses	3,849.13	9,739.43
Traffic expenses		914.84
Superintendence of transportation	2,091.97	

Act, 1919, for approval of its Standard Freight Mileage Tariff, C.R.C. no. 646.

Michigan Central Cheese Rates.

30,920. April 23.—Re application of Michigan Central Rd. for permission to publish, on one day notice, revised rates on cheese from stations in Canada to the Atlantic seaboard, for export. Upon it appearing that an error has been made in the publication of commodity rates on cheese, by transposition of the rates for carloads, and less than carloads, and immediate correction being necessary, in order to give effect to the proper rates, the Board orders that the company be permitted to publish a supplement to its tariff C.R.C. 3003, so as to give effect to the proper rates on cheese; the said supplement to be made effective upon one day notice.

Railway Rolling Stock Orders and Deliveries.

The Timiskaming & Northern Ontario Ry. is in the market for several cabooses.

The estimates for the year ending Oct. 31, 1922, submitted to the Ontario Legislature recently, include $150,000 for two mikado locomotives.

The four switching locomotives which the Railways and Canals Department has ordered from Montreal Locomotive Works, as mentioned in our last issue, will be used in construction work on Welland Ship Canal.

W. W. Butler, President, Canadian Car & Foundry Co., and W. H. Woodin, a director of that company and President, American Car & Foundry Co., are in England, endeavoring to close a large equipment order with British interests, for the two concerns.

Canadian National Rys., between Mar. 5 and Apr. 9, received the following rolling stock; 140 stock cars, completing an order for 350; 17 sleeping cars, completing an order for 18, and 20 baggage cars, completing an order for that number, from Canadian Car & Foundry Co.

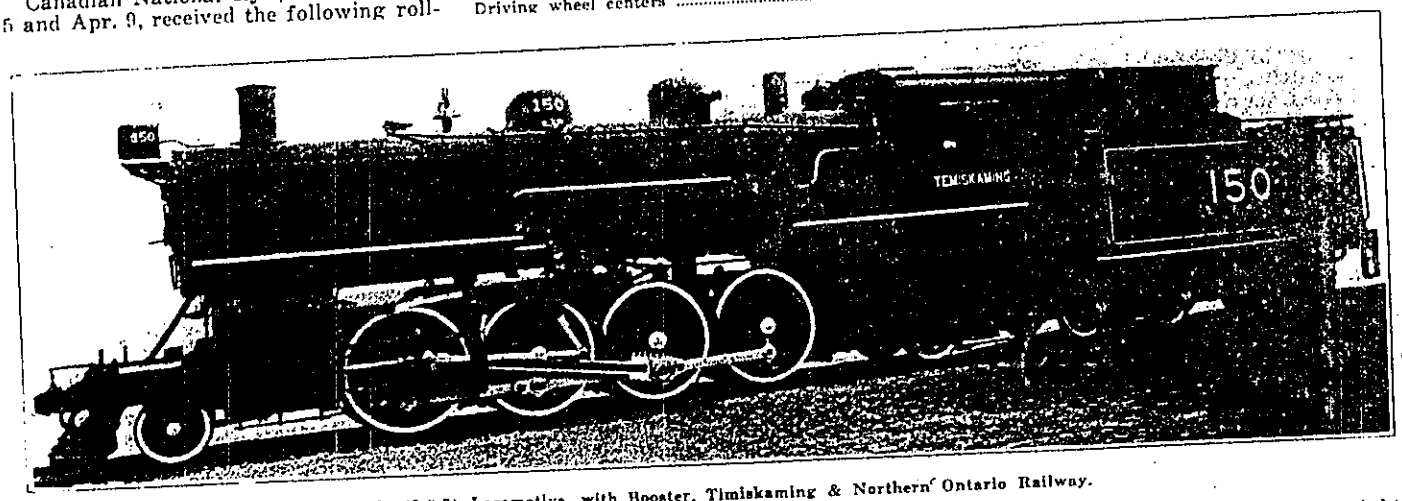
The G.T.R., during February and March, received the following additions to rolling stock: 7 switching locomotives from its Montreal shops; 840 automobile cars, 80,000 lb. capacity, and 50 baggage and express cars, from Canadian Car & Foundry Co.; and 42 automobile cars, 80,000 lb. capacity, from American Car & Foundry Co.

The C.P.R., between Feb. 11 and Apr. 13, received the following additions to rolling stock: 84 automobile cars and 160 refrigerator cars from its Angus shops, Montreal; 790 steel frame box cars from Canadian Car & Foundry Co., Fort William, Ont.; 250 steel frame box cars from National Steel Car Corporation; and 218 steel frame box cars from Eastern Car Co.

The Canadian Car & Foundry Co., between Mar. 14 and Apr. 12, delivered the following rolling stock: From Montreal, 13 sleeping cars and 18 baggage cars, to Canadian National Rys.; and 20 baggage express cars and 714 automobile cars to G.T.R.; from Fort William shops, 357 box cars to C.P.R.; and from Amherst shops, 200 trucks to Reid Newfoundland Co.

The Timiskaming & Northern Ontario Ry. has received 4 mikado (2-8-2) locomotives from Canadian Locomotive Co. One of them is equipped with a booster, a description and illustrations of which were published in Canadian Railway and Marine World for Dec., 1920, and an illustration of the completed locomotive is given on this page. The chief particulars are as follows:—

Weight on drivers	197,000 lb.
Weight, total	258,000 lb.
Wheel base of engine, rigid	16 ft. 6 in.
Wheel base of engine, total	34 ft. 8 in.
Heating surface, firebox	208 sq. ft.
Heating surface, tubes	3,016 sq. ft.
Heating surface, total	3,224 sq. ft.
Driving wheels, diar.	63 in.
Driving wheel centers	Cast steel
Driving journals, diar and length	Main 10 x 13 in. Others 9 x 13 in.
Cylinders, diar. and stroke	25 x 30 in.
Boiler, type	Radial stayed
Boiler, pressure	180 lb.
Tubes, no. and diar.	202 2 in.; 32 5¾ in.
Tubes, length	20 ft.
Brakes	Westinghouse
Superheater, Locomotive Superheater Co.'s type	A
Weight of tender loaded	143,000 lb.
Water capacity	6,500 imp. gal.
Coal capacity	12 tons
Tender truck, type	4 wheel equalized
Wheel, type	Rolled steel
Wheel, diar.	33 in.
Journal, diar. and length	M.C.B. 5½ by 10 in.
Brake beam	Trussed type



Mikado (2-8-2) Locomotive, with Booster, Timiskaming & Northern Ontario Railway.

Rolling Stock Ordered for Government Railways, Etc.

The following, evidently officially inspired, press dispatch was sent from Ottawa April 5:—"If Canadian railways have not been able to handle all Canada's freight requirements in 1918, 1919, and 1920, it is not the fault of the Dominion Government. Orders were given by the Government for delivery to the Canadian National Rys. in 1918 and 1919, and to the Canadian National-Grand Trunk Pacific and Grand Trunk Rys. in 1920, of 382 locomotives, costing $21,328,247; 21,463 freight cars, costing $65,710,094, and 331 passenger cars, costing $11,314,469; or $98,352,811 in all. All Canadian car building and locomotive works participated in this business, but some of the rolling stock was constructed outside trhe country for G.T.R. Western Lines. Most of this money, however, was spent in Canada.

"For delivery in 1918 the Government ordered for the Canadian National Rys. 185 locomotives, of all types, 21 passenger cars, and 8,715 freight cars, at a total cost of $36,217,998. For delivery in 1919 to the Canadian National, the Government ordered 50 locomotives, 3,037 freight cars and 260 passenger cars at a total cost of $18,718,820, and for delivery to the same road in 1920, 75 locomotives, 4,776 freight cars and 50 passenger cars, at a total cost of $22,058,272.

"The Government ordered for delivery in the same year to the Grand Trunk Pacific Ry. 37 locomotives and 860 freight cars, valued at $5,243,925, and to the Grand Trunk Ry. 35 locomotives and 4,075 freight cars, at a total cost of $16,113,795.

"The locomotives cost from $37,000 to $40,500 each, for switching locomotives, to $72,500 for the Santa Fe type obtained from Montreal Locomotive Works. Freight cars cost from $2,370 for flat cars, to $48,500 for a steel rotary snow plough, also obtained from the Montreal company. The passenger cars ranged from $24,000 for colonist cars to $49,348 for sleepers."

Particulars of these orders were, of course, given from time to time in Canadian Railway and Marine World, but it was not stated that the orders had been placed by the Government. The Minister of Railways is constantly reiterating that the Government does not interfere in the management of the Canadian National Rys., etc., and that the directors have a free hand. If that is the case, why should it be stated that the Government places the rolling stock orders? Does the Minister want to take the credit for popular things and to place the responsibility for others on the directors?

port of the British Columbia Minister of Railways for 1920 states that during the year $542,832.69 was paid by the Government from the proceeds of the guaranteed terminal securities on account of work done on the terminals on the Vancouver Island and mainland water fronts. The estimated total cost of the terminals was $9,141,503.40, and the total amount of cash available from the securities issued was $9,403,843.12. The total amount earned up to Dec. 1920 was $7,353,906.19, of which $84,250.34 was being retained under the terms of the contract. The following table shows the distribution of these sums:—

Terminal work	Estimated cost	Cash available	Earned to Dec. 1920
Vancouver	$4,308,455.19	$4,268,363.21	$3,626,418.44
New Westminster	2,203,601.50	2,179,118.97	1,822,458.41
Port Mann	1,213,424.62	1,200,570.16	1,175,129.92
Steveston	353,988.39	349,996.73	296,892.54
Patricia Bay	209,908.29	208,008.39	204,304.68
Victoria	853,125.00	843,790.66	238,202.20

(May, pg. 247.)

Railway Rolling Stock Orders and Deliveries.

Canadian National Rys. have received 12 dining cars from Canadian Car & Foundry Co., completing an order for that number.

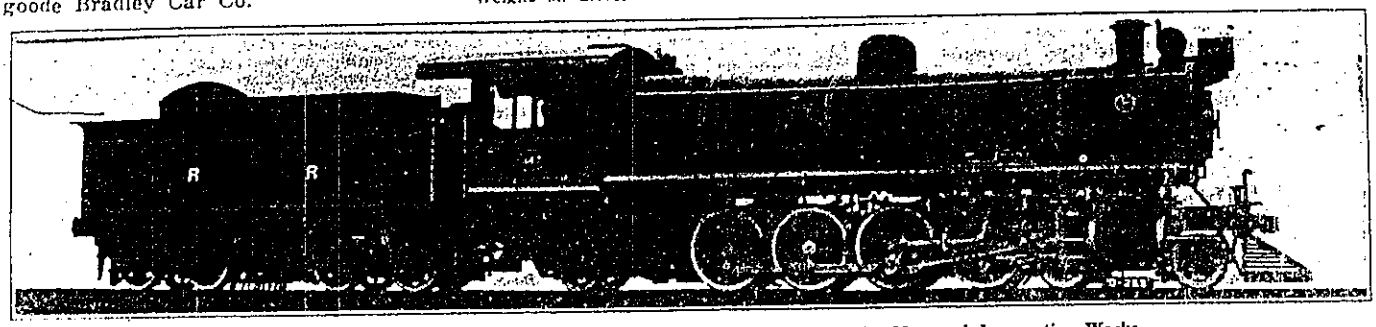
The G.T.R., between Apr. 11 and May 12, received 2 switching locomotives from its Montreal shops, 160 automobile cars, 80,000 lb. capacity, from Canadian Car & Foundry Co., 50 flat cars, 100,000 lb. capacity, from National Steel Car Co., and 4 express horse cars from Osgoode Bradley Car Co.

shops; and 2 box cars to C.P.R. from its Fort William, Ont., shops. The company reports an order from Toronto Transportation Commission for 100 motor cars and 60 trailer cars, as mentioned in our last issue.

The Timiskaming & Northern Ontario Ry. has received 4 Pacific (4-6-2) type locomotives from Canadian Locomotive Co., all equipped with boosters. Following are the chief details:—

Weight on drivers	155,000 lb.
Weight, total	252,000 lb.
Wheel base of engine, rigid	12 ft. 2 in.
Wheel base of engine, total	32 ft. 6 in.
Wheel base of engine and tender	69 ft. 3½ in.
Heating surface, firebox and arch tubes	217 sq. ft.
Heating surface, tubes and flues	2,716 sq. ft.
Heating surface, total	2,933 sq. ft.
Driving wheels, diar.	69 in.
Driving wheel centers	Cast steel
Driving journals	10 x 13 in.
Cylinders, diar. and stroke	23 x 28 in.
Boiler, type	Radial stayed
Boiler pressure	200 lb.
Tubes, no. and diar.	170—2¼ in.; 32—5½ in.
Tubes, length	18 ft. 8 in.
Injectors	Ontario
Safety valves	Coale
Brakes	Westinghouse American
Packing	Paxton-Mitchell
Superheater	Superheater Co.'s type A
Booster engine	Franklin Railway Supply Co.
Speed recorder	Boyer
Cab	Vestibule type, all steel
Weight of tender loaded	156,000 lb.
Tender capacity, water	6,500 Imp. gall.
Tender capacity, coal	12 tons
Tender, type	Water bottom, vestibule attachment
Truck, type	4 wheel, Commonwealth
Truck wheel, type	Steel-tired, cast steel center
Truck wheel, diar.	36 in.
Truck journals	5½ x 10 in.
Brake beams	Simplex high speed

Rhodesia Ry. Locomotives.—As stated in Canadian Railway and Marine World for Nov. 1920, the Rhodesia Rys., South Africa, ordered 12 mountain type (4-8-2) locomotives from Montreal Locomotive Works, which have been completed. These locomotives, an illustration of one of which is given herewith, are superheated, and equipped with brick arch, piston valves, outside valve gear, etc. The chief details are as follows:—



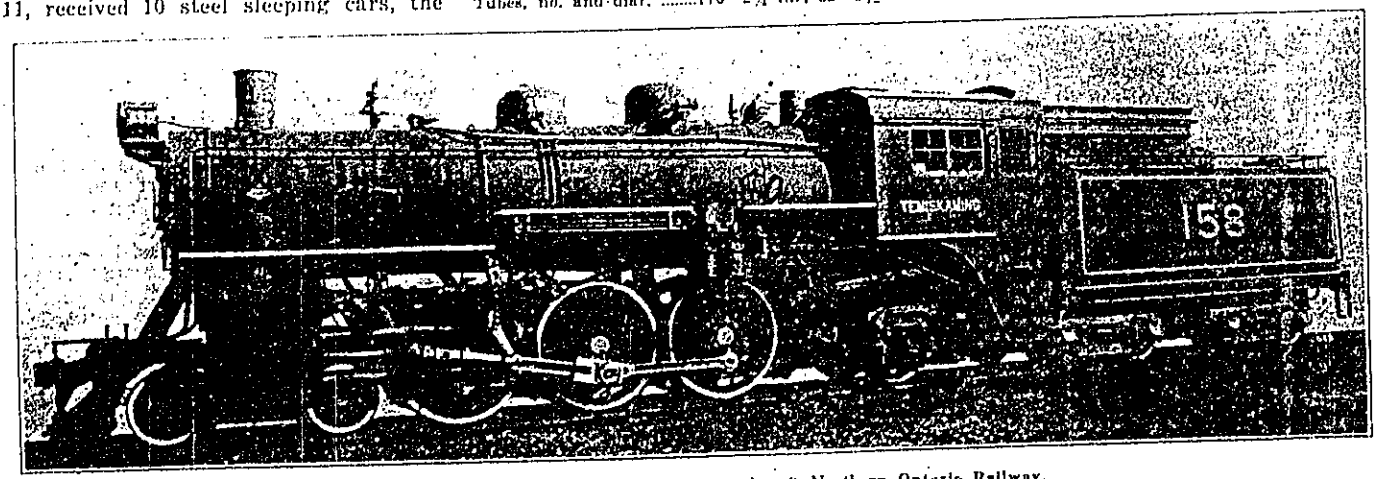
Mountain Type Locomotive, Rhodesia Railways, South Africa, built by Montreal Locomotive Works.

Gauge	3 ft. 6 in.
Fuel	Soft coal
Wheel base, driving	12 ft. 9 in.
Wheel base, engine	30 ft. 7 in.
Wheel base, engine and tender	56 ft. 10½ in.
Weight, engine	173,000 lb.
Weight, tender	108,000 lb.
Weight on drivers	119,000 lb.
Weight on leading truck	29,500 lb.
Weight on trailing truck	24,500 lb.
Boiler, type	Belpaire, straight top
Boiler, diam. inside first ring	65 in.
Boiler pressure	180 lb.
Firebox, length and width	80¾ x 62¾ in.
Tubes	129—2¼ in. diam; 26—5½ in. diam.
Tubes, length	18 ft. 9 in.
Heating surface, tubes	1,415 sq. ft.
Heating surface, flues	695 sq. ft.
Heating surface, firebox	137 sq. ft.
Heating surface, arch tubes	16 sq. ft.
Heating surface, total	2,263 sq. ft.
Superheating surface	589 sq. ft.
Grate area	35.2 sq. ft.
Maximum tractive effort	37,000 lb.
Factor of adhesion	3.22

The item of $150,000 in the estimates for the year ending Oct. 31, 1922, passed by the Ontario Legislature recently, as mentioned in Canadian Railway and Marine World for May, is for two additional Mikado locomotives for the Timiskaming & Northern Ontario Ry. We were advised recently that it had not then been actually decided to order these.

The C.P.R., between Apr. 14 and May 11, received 10 steel sleeping cars, the frames of which were built by Canadian Car & Foundry Co., and the cars finished at Angus shops, Montreal; 282 steel frame box cars from Eastern Car Co., and 2 steel frame box cars from Canadian Car & Foundry Co., Fort William.

Canadian Car & Foundry Co., between Apr. 15 and May 15, delivered the following rolling stock:—12 dining cars to Canadian National Rys., 38 tank cars to Imperial Oil Ltd. from its Montreal



Pacific Locomotive, with Booster, Timiskaming & Northern Ontario Railway.

miles an hour and the drawbar pull was 36,000 lb. The drawbar pull quickly increased to 43,000 lb. and speed was maintained at about an average of 8 miles an hour on the 0.8%, 1% and 0.75% portions of the grade until the booster was cut out 0.42 mile south of mile 105. When the booster was cut out, the drawbar pull dropped from 40,000 lb. to an average of 36,000; when the booster was again cut in, 0.42 mile south of mile 104, on the 1% portion of the grade, the drawbar pull increased from 37,000 to 42,000 lb., speed remaining constant for 0.6 mile at 10 miles an hour, but dropping to 9 miles an hour on the 6 degree 12 minute curve, while drawbar pull increased to 43,000 lb. at this speed. The train was thus handled into Cobalt without difficulty, by making the booster operative twice for short intervals on the hardest pulls. It will be noted that the line representing steam pressure in fig. 2 is straight. The reason for this is that mikado locomotive 150, in common with the others of its class used by the T. & N.O.R., and Pacific type locomotive 157, proved to be an exceptionally free steamer, so that no deviation of any importance from the 180 lb. boiler pressure was experienced.

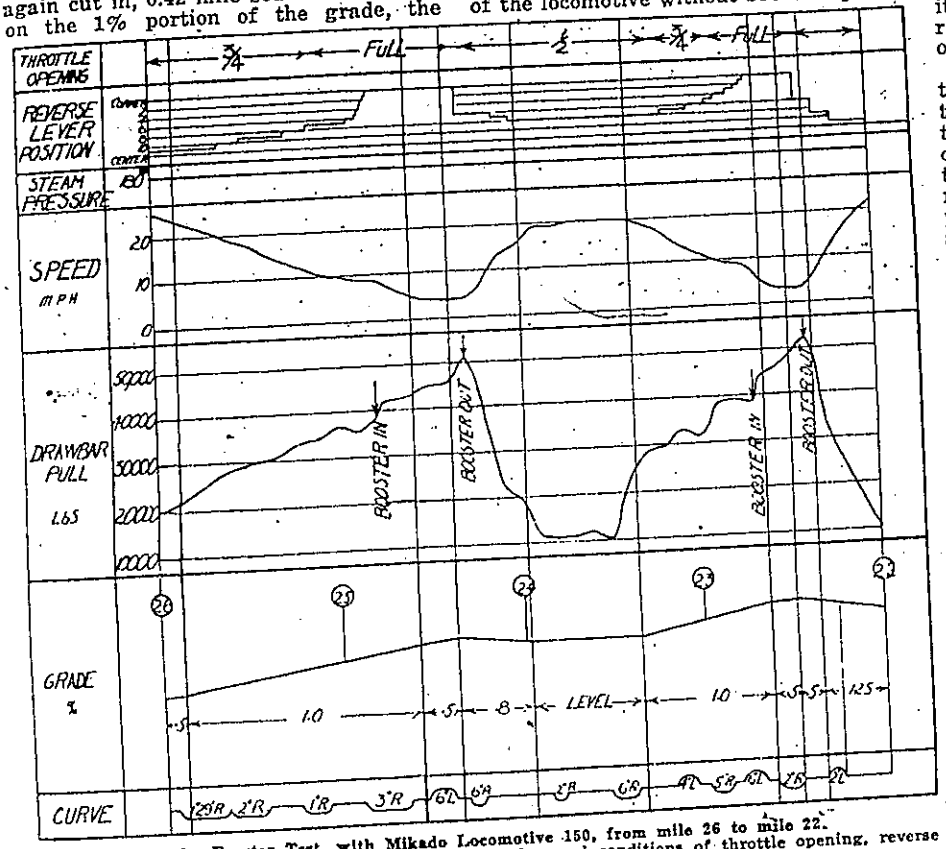


Fig. 3. Booster Test, with Mikado Locomotive 150, from mile 26 to mile 22.
Showing performance with booster cut in, on 1% grades, and conditions of throttle opening, reverse lever position, steam pressure, speed, drawbar pull, grade, and curve at all times.

Southbound, out of Cobalt, another load was switched into the train, making the actual tonnage 1,848, and adjusted tonnage 2,048 tons. Fig. 3 shows the results with this train, between miles 26 and 22. The booster was cut in 0.22 mile south of mile 25, on the 1% grade, when the speed was 9 miles an hour and drawbar pull 39,000 lb. As the speed gradually came down to 4 miles an hour, while the train approached the summit, the drawbar pull gradually increased until it reached a maximum of 51,000 lb. The booster was cut in again 0.32 mile south of mile 23, on a 1% grade, but not until hour, the drawbar pull being 38,000 lb. As the train topped the summit, the speed had decreased to 3 miles an hour and the drawbar pull increased to 52,000 lb. The train then proceeded to North Bay.

Fig. 4 (left) shows tractive effort and speed obtained with Pacific type locomotive 157 in a lift and acceleration test, handling a passenger train of 13 cars, same date. As noted, the tractive power of the locomotive without booster operating, is 36,600 lb. As shown by fig. 4 942.7 tons, northbound out of the T. & N.O.R. North Bay terminal. This locomotive was tried on May 11, and handled Canadian National Rys. transcontinental passenger train 1 from North Bay to Englehart, bringing back train 2 on the booster cut in, on lifting the train, was 45,000 lb. In 60 seconds, the drawbar pull was 37,000 lb., and a speed of 5 miles an hour had been attained; in 2 minutes, the drawbar pull exerted was 28,000 lb., at a speed of 12 miles an hour, and in 170 seconds, or less than 3 minutes, a speed of 15½ miles an hour had been attained, the drawbar pull being 26,000 lb. The manner in which the locomotive handled the train on this lift, which took place over frogs and switches, on a 1% grade, and uncompensated 10 degree curve, and the rapid acceleration shown under these conditions, were highly gratifying, and demonstrated the ability of the booster in getting trains to road speed quickly, in leaving terminals, or after station stops.

Fig. 4 (right) shows the result of a test designed to determine the acceleration obtainable on level track. The same train, of 942.7 tons, was handled north out of Tomiko, mile 27.3 from North Bay, the drawbar pull when lifting the train registering as 38,000 lb. This remained practically constant for 10 seconds, as a speed of 3½ miles an hour was being attained; in 30 seconds it registered as 29,000 lb.; the speed being 8.5 miles an hour. At the end of one minute, the drawbar pull showed as 23,000 lb., and speed had increased to 15.5 miles an hour.

The tests with mikado locomotive 150 amply demonstrated the correctness of the proposition that a largely increased tonnage can be handled over a division without difficulty, if it can be successfully got over the few hard pulls of the division, and they demonstrated the ability of the booster in aiding the locomotive to get it over the hard pulls. The T. & N.O.R. has a profile marked by several short, steep grades, which have acted to limit the tonnage handled in the past. By enabling a locomotive to take a tonnage, increased by 20%, over these grades, the value of the booster applied to the freight hauling units of such a railway is at once evident. In addition, many of the stations and water stops are on grades, so that time saved over the division by the high acceleration of passenger trains obtained by the use of the booster in leaving stations, in addition to that saved on the hills, would be large. The T. & N.O.R. officers have expressed complete satisfaction with the performance of the device and the efficiency shown by it in doing the work for which it was designed.

Canadian Railway and Marine World is indebted to S. B. Clement, Chief Engineer, Timiskaming & Northern Ontario Ry., for the charts reproduced in the accompanying illustrations, which were prepared by Frank Williams, Mechanical Designer, Canadian Government Railways, Moncton, N.B.

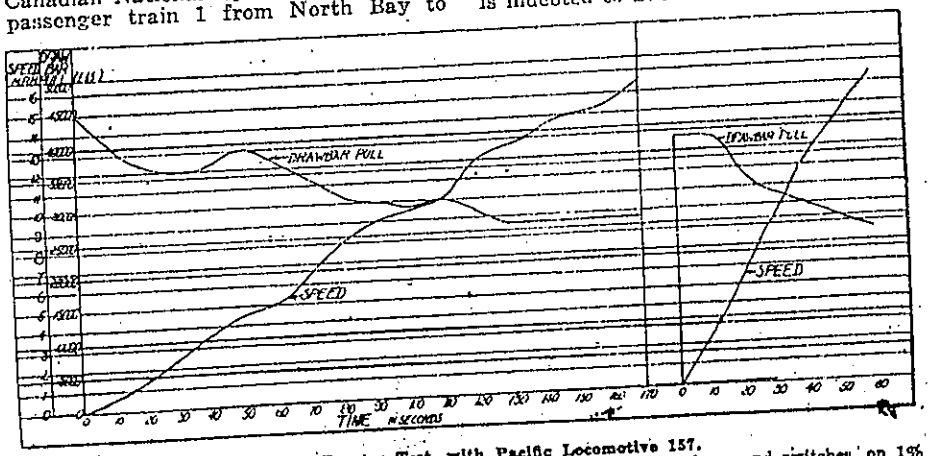


Fig. 4. Booster Test, with Pacific Locomotive 157.
Left side, lift of passenger train of 942 tons out of North Bay yard, over frogs and switches, on 1% grade, and 10 degree curve, uncompensated. Right side, acceleration, with aid of booster, in starting train out of Tomiko station on level track.

BOSTON & MAINE R.R.

Historical Society, inc.

75¢

B&M BULLETIN

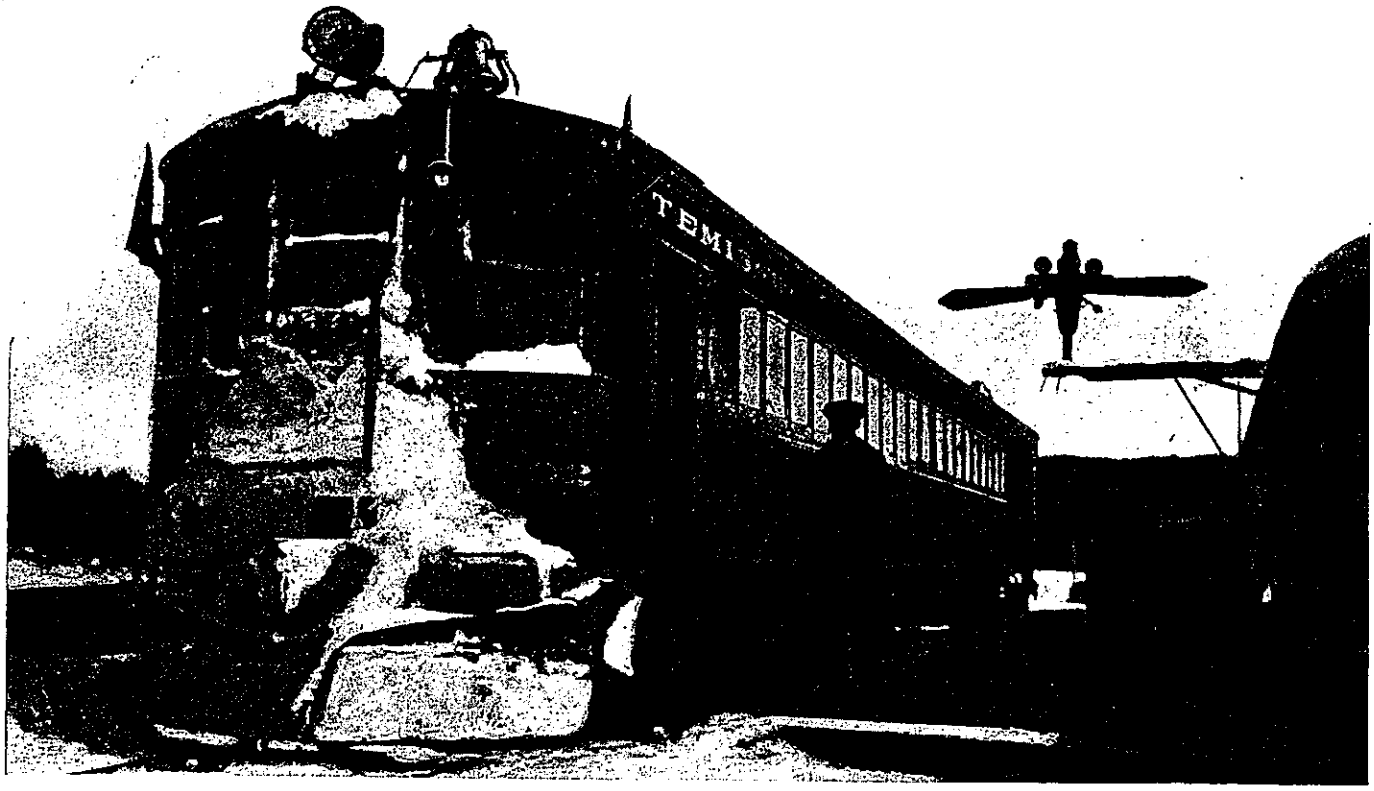
September 1972 Volume 2 Number 1

Nipissing Central Railway Operation Terminated.

After prolonged discussion of the advisability of taking the step, operation of the Nipissing Central Ry., the Temiskaming and Northern Ontario Ry. electric subsidiary, connecting Cobalt, North Cobalt, Haileybury and New Liskeard, was terminated on Feb. 9, and a privately-owned bus service was inaugurated on the following day.

Electric railway service was begun on the line serving the places mentioned in 1907, and the enterprise was taken over by the Temiskaming and Northern Ontario Ry. Commission in June, 1911. Up until about two years ago, an hourly service was given in each direction, but the schedule was then reduced to 1½ hr. headway. No part of the service had been abandoned previous to Feb. 9. No part of the electric railway service was operated over T. & N.O. Ry. steam line tracks, the electric railway cars having been operated on independent tracks, a portion of which paralleled the steam railway line. To Feb. 5, the T. & N.O.R. management had not arrived at a decision as to the disposition to be made of the electric railway tracks.

MARCH 1935



Brill 73 ft. Model 250 Gas-electric Car operated between Swastika and Chemins, Canada, by the Temiskaming & Northern Ontario Railway.

The Broad Field of the Gas-Electric

Brill Gas-electric Cars today are to be found giving satisfactory service under the most varied conditions.

Since the A. R. A. Convention in Atlantic City, where 60-ft. and 73-ft. cars were exhibited, an unusually large number of railroads have introduced in service cars of both capacities equipped with single power plants. Also, the Lehigh Valley Railroad pioneered with the introduction of double power plant cars, 70 ft. 6 in. long.

With ample capacity and power, and unrestricted to any appreciable extent by varying degrees of temperature, the field of the Gas-electric Car is certainly a broad one.

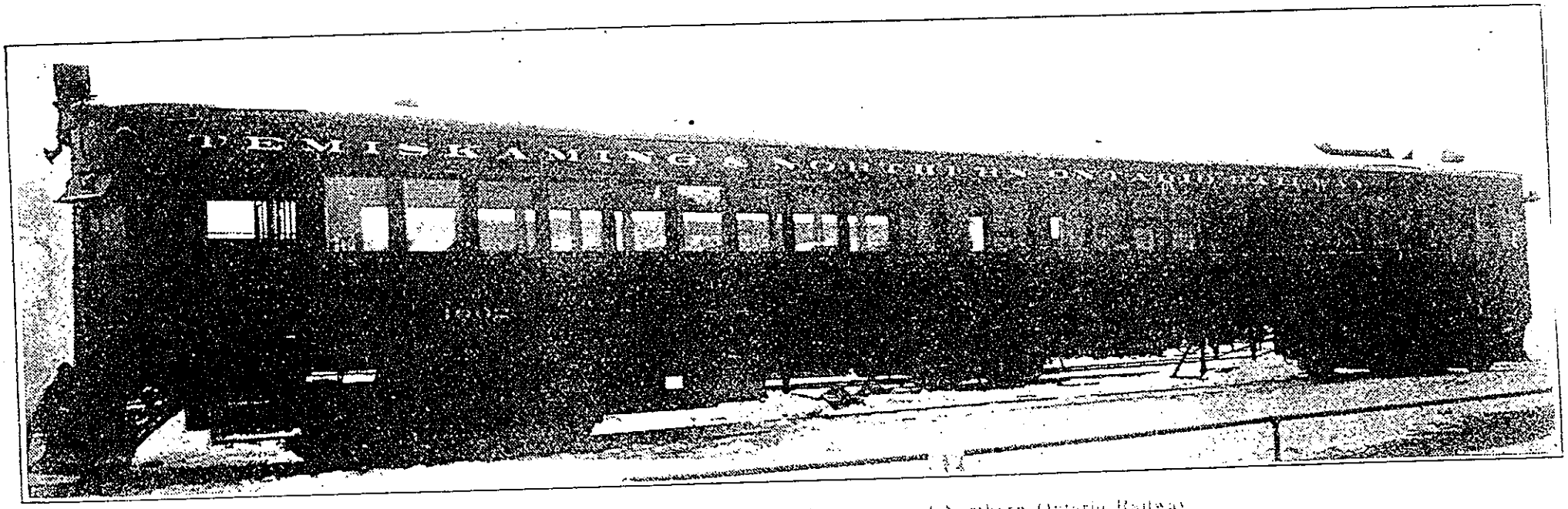
BRILL

AUTOMOTIVE CAR DIVISION

The J. G. Brill Company

Philadelphia, U. S. A.

Chicago Office: Railway Exchange Building



Gasoline-electric Self-Propelled Car, Timiskaming and Northern Ontario Railway

Great Northern Ry., [illegible] B.C., press dispatch states that the Great Northern Ry., in connection with the handling of passenger traffic over its Rexford Branch to Elko, and thence into Fernie over Canadian Pacific Ry. tracks, has placed in operation, as an experiment, a large gas-electric car with main passenger compartment and baggage room, and that if trials are successful, it will be retained in operation there permanently, displacing steam train equipment consisting of light locomotive and 2 cars.

Canadian National Ry.—A St. John, N.B., paper stated early in January that the C.N.R. management had placed in operation, between St. John and Hampton, a "new oil burning Diesel locomotive." Canadian Railway and Marine World's enquiry elicited official advice that the management had transferred oil-electric car 15,823, which had been in service on Prince Edward Island lines, to the Sussex and St. Martins subdivisions, Atlantic Region, where it is operating on the schedules of trains 131 and 136, between St. John and Hampton, and also, during the winter, as trains 49 and 50, between St. John and Moncton, on Sundays only, as follows:—lv. St. John 9.30 a.m., arr. Moncton 1 p.m.; lv. Moncton 4.45 p.m., arr. St. John 8 p.m.

A Montreal dispatch quotes Canadian National passenger department officials as stating that the railway is operating 30 self-propelled car services, with approximate annual mileage of 1,540,084, that placing in operation of additional cars now being built will increase this to about 1,935,220 miles a year, and that by the use of self-propelled cars, loss of short haul passenger traffic to buses and automobiles has been curbed considerably.

Premier Coates, of New Zealand, while in Montreal, on Jan. 12, displayed considerable interest in one of the Canadian National oil-electric cars which he saw at the Bonaventure station. Construction and operation details were explained to him by R. G. Gage, Electrical Engineer, and he made a trip with Mr. Gage to the railway's shops at Point St. Charles, where other oil-electric cars are being built.

Timiskaming and Northern Ontario Ry. has received from Ottawa Car Manufacturing Co. the gas-electric self-propelled car mentioned in Canadian Railway and Marine World for Aug. 1926, pg. 423, as having been ordered. It weighs about 120,000 lb., is 73 ft. long, 9 ft. 10 in. wide over posts, and is divided into main room seating 57 passengers, smoking compartment seating 20, baggage compartment and engine compartment. It is equipped with a rear vestibule 6 ft. 5¾ in. long. The power plant consists of a gasoline engine, with cylinders 7¼ in. bore by 8 in. stroke, developing 250 h.p. at 1,100 r.p.m., direct connected to a Westinghouse type 176 160 k.w. self-ventilated generator with normal rating 500 volts. This supplies current to 2 Westinghouse 557-A-8 140 h.p. railway motors mounted on the leading truck. An auxiliary generator mounted on brackets is used to excite the field winding and supply auxiliary power to other circuits. Control is by manual operation of throttle lever, at each end of car. There are 16 windows on each side of car, having double sash. Seats are upholstered in Pantasote, and are reversible. On one side of the aisle, the seats hold 3 passengers each, and on the other side 2 each. All side windows are fitted with curtains. Interior lighting is provided by 39 lights with standard glass shades. A plow is attached at each end of car. The car exterior is finished in Pullman green, with gold lettering.

Gasoline-electric Self-Propelled Car, Timiskaming and Northern Ontario Railway.

The car was given a trial trip between Ottawa and Renfrew, leaving Ottawa at 10.15 a.m. and returning at 4.20 p.m., a maximum speed of 62 m.p.h. and an average speed over long intervals of 45 m.p.h. being reported. Among the party on the trip were S. B. Clement, Chief Engineer, T. and N.O.R.; W. H. McIntyre, Vice President and General Manager; L. D. Byce, Superintendent of Works; F. S. Beattie, Superintendent, Car Department, and J. R. Allan, of Sales Department, Ottawa Car Mfg. Co.; W. J. Warnick, Superintendent, Toronto, Hamilton and Buffalo Ry.; F. M. Donegan, Superintendent, Algoma Eastern Ry., and representatives of the Canadian National and Canadian Pacific Rys. Lt. Col. L. T. Martin, T. and N.O. Ry. Commissioner, and Mrs. Martin, accompanied the party on the return trip from Renfrew to Ottawa.

The car was delivered at North Bay, Ont., on Dec. 31, 1926, and on Jan. 3 left there under its own power for the T. and N.O.R. Larder Lake branch, which runs easterly from Swastika, 165.8 miles north of North Bay, to Cheminis, on the Ontario-Quebec boundary, serving the Kirkland Lake gold mining area. It is operating on this branch, between Swastika, Kirkland Lake, Larder Lake and Cheminis.

Rapid Transit Shipping Co. Ltd. has been incorporated under the Ontario Companies Act with authorized capital of $40,000 and office at Windsor, to carry on the business of common carrier of every description by rail, water or otherwise. The nominal incorporators include B. H. Furlong, barrister, Windsor.

Marine World's annual [illegible] track laid on new main and branch l during 1926 are tabulated below. total new mileage reported is 455.80 m compared with 458.29 reported in 1 Of this mileage 191.60 miles was laid Canadian Pacific Ry., and 114.99 by C dian National Ry. The latter also during the year a line 8.50 miles long its station at Malagash, N.S., to Malagash Salt Products Co.'s mine, w line will be operated by the salt comp The Canadian National Construc Department also built the National Tr continental Branch Lines Co.'s line Taschereau to Noranda, Que., 44.71 m and is doing the rehabilitation and con tion of the Hudson Bay Ry. Adding mileages of these three lines to the Cana National total of 114.99 miles, giv total of 180.20 of new track laid u C.N.R. management during the year. new mileage laid was distributed provinces as follows:—Nova Scotia, miles; Quebec, 52.11; Ontario, Manitoba, 5.10; Saskatchewan, 2 Alberta, 82.53. Following are the mi laid on the several lines:—

	Miles
ABITIBI, TRANSPORTATION & NAVIGATION CO.:	
Mile 7.50 on main line westerly	2.60
Mile 12.00 on main line easterly	7.00
CANADIAN NATIONAL RY.:	
QUEBEC:	
St. Remi d' Amherst branch	2.30
MANITOBA:	
Pine Falls branch, mile 14.40 to 19.50	5.10
SASKATCHEWAN:	
Bengough-Willowbunch branch, mile 61.94 to 71.71	19.97
Dunblane S.E. branch, mile 24.66 to 26.00	1.34
Turtleford S.E. branch, mile 23.30 to 65.53	42.23
Acadia Valley branch, mile 0.8 to 12	11.92
ALBERTA:	
Acadia Valley branch, mile 12 to 24.62	12.62
St. Paul de Metis S.E., mile 120.91 to 140.42	19.51
CANADIAN PACIFIC RY.:	
Bromhead to Lake Alma, Sask	26.30
Assiniboia to Coronach, Sask.	59.10
Melfort, Sask., northerly	6.50
Unwin to Clandonald, Sask	71.50
Cardston to Glenwoodie, Alta.	28.20
HUDSON BAY RY.:	
Kettle Rapids to Limestone River	
LACOMBE AND NORTHWESTERN RY.:	
Hoadley to Breton, Alta.	
MALAGASH SALT PRODUCTS, LTD.:	
Canadian National Ry. station at Malagash, N.S., to the mine	
NATIONAL TRANSCONTINENTAL BRANCH LINES CO.:	
Taschereau to Noranda, Que.	
ROBERVAL AND SAGUENAY RY.:	
Ha Ha Bay Jct. to Shipshaw, Que.	
SPRUCE FALLS POWER AND PAPER CO.:	
Sturgeon, mile 2.9 from Kapuskasing, Ont., to Smoky Falls, mile 50	

580 RP 1927

Self-Propelled Cars on Steam Railways.

interior is finished in mahogany. The power plant consists of a gasoline engine, with cylinders 7¼ in. bore by 8 in. stroke, developing 250 h.p. at 1,100 r.p.m., direct connected to a Westinghouse type 176 160 k.w. self-ventilated generator with normal rating 500 volts. This supplies current to 2 Westinghouse 557-A-8 140 h.p. railway motors mounted on the leading truck. An auxiliary generator mounted on brackets is used to excite the field winding and supply auxiliary power to other circuits. Control is by manual operation of throttle lever, at each end of car. There are 16 windows on each side of car, having double sash. Seats are upholstered in Pantasote, and are reversible. On one side of the aisle, the seats hold 3 passengers each, and on the other side 2 each. All side windows are fitted with curtains. Interior lighting is provided by 39 lights with standard glass shades. A plow is attached at each end of car. The car exterior is finished in Pullman green, with gold

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1926

Canadian Pacific Railway

The following table, showing monthly gross ings, working expenses and net profits in , compared with those of 1936, has been com- ued in Canadian Transportation's office from tatements supplied by the C.P.R. management. The figures cover the operation of the C.P.R. self and also the Algoma Eastern Ry., Dominion tlantic Ry., Esquimalt and Nanaimo Ry., Fredericton and Grand Lake Coal and Ry. Co., Montreal and Atlantic Ry., New Brunswick Coal and Ry. Co., and Quebec Central Ry. The difference between revenue and expense figures and those issued by the Dominion Bureau of Statistics is due to the segregation of certain income items by the Bureau, the net results remaining the same.

	Gross Earnings		Working Expenses		Net Earnings		
	1937	1936	1937	1936	1937	1936	Increase
January	$10,194,064	$9,323,822	$ 9,280,554	$ 8,711,249	$ 913,510	$ 612,573	$300,937
February	9,724,629	9,280,594	8,733,889	8,413,196	990,740	867,398	123,342
March	11,748,389	10,679,577	10,010,225	9,331,843	1,738,164	1,347,734	390,430
April	11,370,019	10,580,236	10,021,609	9,242,778	1,348,410	1,337,457	510,952
May	11,334,197	11,222,507	10,259,978	9,772,218	1,574,219	1,450,289	123,930
June	11,418,963	10,957,610	10,223,352	9,732,060	1,195,111	1,175,549	19,562
July	12,041,527	11,577,430	10,946,067	10,598,330	1,095,460	979,100	116,360
	$78,831,788	$73,621,776	$69,476,174	$65,851,676	$9,355,614	$7,770,100	$1,585,514

C.P.R. approximate gross earnings in August were $11,915,000, a decrease of $84,000 from those of Aug., 1936.

Minneapolis, St. Paul and Sault Ste. Marie Ry., C.P.R. subsidiary, had a net deficit, after all charges, of $425,744.90 in July, compared with ne of $447,438.53 in July, 1936. In the first even months of 1937, there was a net deficit, fter all charges, of $3,622,710.79, compared with ne of $3,658,892.17 in the corresponding period 1936.

Wisconsin Central Ry., which is in receivership with E. A. Whitman, Vice President and General Manager, M., St. P. and S.S.M.R., as receiver, and which is operated by the M., St. P. and S.S.M.R. as agent for the receiver, had a net income, after all charges, of $122,548.96 in July, compared with one of $30,287.95 in July, 1936. In the first seven months of 1937, there was a net deficit, after all charges, of $265,550.93, compared with one of $723,256.44 in the corresponding period in 1936.

New Locomotives for "The Northland"

The Temiskaming and Northern Ontario Ry. management has received two more Northern type locomotives, with 69 in. drivers, from Canadian Locomotive Co., these being additional to two of this type received in 1936.

The accompanying illustration is of of two Northern (4-8-4) locomotives this year by Canadian Locomotive o., Kingston, for T. and N.O. Ry., brief eference to their delivery having been ade in Canadian Transportation for eptember, pg. 431. These locomotives e being used, upon occasion, in hauling e first class passenger train "The orthland", which is operated over C.N. ys. lines from Toronto to North Bay, id over T. and N.O. Ry. lines from orth Bay to Timmins and Noranda; is train was described fully in Cana- an Transportation for July. When gaged in hauling these trains, these orthern type locomotives display name- ates at each side, mounted on the run- ng board, as shown in the illustration; ien the locomotives are engaged in her service the nameplates are re- oved.

The locomotives' chief dimensions are follows:—

ge	4 ft. 8½ in.
ler pressure	275 lb.
ler diam., first course	76⅛ in.
ler diam., largest course	86 in.
m. leading truck wheels	33 in.
m. driving wheels	69 in.
m. trailing truck front wheels	36 in.
m. trailing truck rear wheels	48 in.
inders, diam. and stroke	22½ x 30 in.
box length and width	120¼ x 84¼ in.
Tubes and flues:	
2¼ in. diam.	45
3½ in. diam.	149
Tube length	21 ft. 0 in.
Driving wheelbase	18 ft. 6 in.
Loco. wheelbase	42 ft. 10 in.
Loco. and tender wheelbase	82 ft. 3 in.
Height, rail to top of stack	15 ft. 2 in.
Tube heating surface	3,407 sq. ft.
Arch tube and syphon heating surface	91 sq. ft.
Firebox heating surface	279 sq. ft.
Superheating surface	1,665 sq. ft.
Grate area	70.3 sq. ft.
Weight in working order, leading truck	62,650 lb.
Weight in working order, on drivers	218,210 lb.
Weight in working order, trailing truck	90,460 lb.
Weight in working order, total loco.	371,320 lb.
Weight in working order, tender	281,500 lb.
Weight in working order, loco. and tender	652,820 lb.
Maximum tractive effort excl. booster	54,500 lb.
Maximum tractive effort incl. booster	64,950 lb.
Factor of adhesion without booster	4.0
Factor of adhesion with booster	5.2

As the tractive effort and adhesion factor figures show, the locomotives are equipped with boosters. The T. and N.O. Ry. was among the first users of the Franklin Railway Supply Co. locomotive booster in Canada. These locomotives utilize SKF roller bearings in all truck boxes. The equipment includes Standard Stoker Co.'s type BK stoker, Westinghouse no. 8 E.T. air brake equipment, Superheater Co.'s type E superheater, Superheater Co.'s C-F feedwater pump (located on the trailing truck), World In addition to that in grate, these

Hancock L.N.L. 6,500 gall. inspirator, Westinghouse air horn, Pyle National Co.'s turbo generator, Wakefield mechanical lubricator, World Huron arch tubes, cut-off control gauge, McAvity flange lubricator, Nicholson thermic syphons, Dunlopillo cushioning material for cab seats and arm rests, General Steel Castings Corp. 4-wheel trailing truck with Alco lateral motion device, Barco flexible joints, Wilson sander, Miner draft gear, Franklin adjustable wedges and radial buffer, King piston rod packing, Barco type M-1 reverse gear, Laird crossheads, Security brick arch and front end throttle and Viloco bell ringer.

The tender, with cast steel water bottom frame, is carried on General Steel Castings Corp., Ltd., 6-wheel cast steel trucks, with 36 in. diam. wheels. Water capacity is 11,000 Imp. gall. and coal capacity is 20 tons. A track sprinkler is included in the equipment.

Railway Accidents Report

The Board of Railway Commissioners for Canada reports that there were 209 accidents on Canadian railways, 35 persons being killed and 200 injured, and 14 accidents at highway crossings, 9 persons being killed and 19 injured, a total of 223 accidents, 44 persons being killed and 219 injured, in July.

Of those killed, one was a passenger, five were employees and 38 others, and of those injured, 46 were passengers, 119 employees and 54 others.

The highway crossing accidents by provinces were:—Nova Scotia, one, an automobile, through driver's carelessness in running into front of standing locomotive.—New Brunswick, one, a truck, through driver's carelessness in failing to take precaution when approaching crossing.—Quebec, two, an automobile and a truck, through drivers' carelessness in failing to stop for crossing and in failing to stop for crossing and running into side of train, respectively.—Ontario, eight, automobiles in six and trucks in two, all through drivers' carelessness in three driving on to crossings in front of trains and being struck, in one stalling on crossing, in one being struck by track motor and in one having no headlights and running into side of train in the automobile cases, and in one travelling at excessive speed and in one running into side of train in the truck cases.—Manitoba, one, an automobile, driving against rays of sun had view of train obscured.—Saskatchewan, one, an automobile, through driver's carelessness in driving on to crossing in front of approaching train and being struck.

All the highway accidents occurred at unprotected crossings, nine taking place during the day and five at night.

ended Sept. 11