

**CANADIAN RAILROAD HISTORICAL ASSOCIATION  
INCORPORATED.  
MONTREAL, CANADA**

NEWS REPORT #61

NOVEMBER 1955

NOTICE OF MEETING

The regular monthly meeting of the Association will be held in room 903 Transportation Building, 159 Craig Street West, at 8:00 PM on Wednesday, November 9th, 1955. The speaker of the evening will be Mr. S.G. Harwood of the Montreal Locomotive Company, who will give a talk entitled "Diesels -- Canadian Made" with particular reference to MLW's new unit of type DL-700. Members and guests are cordially invited to attend. A question period will follow the talk.

SO IT DOES MAKE SENSE,  
AFTER ALL !

-----

THE UNIQUE TRACK GAUGE of four feet, ten and seven eighths inches, used by the TORONTO TRANSIT COMMISSION, and its predecessors, the Toronto Transportation Commission, the Toronto Railway Company, and

the Weston, High Park and Toronto Railway, has been a puzzle to ferroequinologists for many years. How could any one, in their right mind, select such an unusual measurement? Naturally, Toronto would want to be different, but why not a relatively simple measurement, like 4'10" or 4'11" ?

I have heard two completely different and contradictory explanations, but always thought that they should be taken with a grain of salt. According to one prominent rail historian, the gauge was imposed originally by the city council so that fire department vehicles could "ride the rails" when going to fires in a hurry, but that did not sound reasonable because riding the rails was a popular but dangerous custom in other cities where the street railways were standard gauge. Usually the rails were two or three inches higher than the road surface frequently causing carriages and light delivery wagons to overturn and in most well-regulated cities the practice was forbidden. Another equally learned authority insisted most emphatically that the Toronto gauge was used so that ordinary vehicles could NOT ride the rails. So, when the natives disagree, what is a poor Montrealer to do ?

Not long ago, I was amusing myself by compiling a list of all the gauges used in various parts of the world, and converting the measurements from feet and inches to the metric system, and vice versa, when suddenly the light dawned! The Toronto street railway gauge is exactly 1.50 meters, and it is evident that some early official had a good idea.

Robert R. Brown.

MONTREAL STREET RAILWAY  
901 CLASS STREET CARS.

by R.M. Binns

On May 23rd, 1910, the Montreal Street Railway Co. put into service, on St. Catherine Street, the first car of a new lot of fifty being built by the Ottawa

Car and Manufacturing Co. This car was No. 901.

Forty five years and one month later, twelve of these cars remained. On June 22nd, 1955, the last to operate in passenger service pulled into St. Denis yards at 6:47 PM from run 55 route 29, thereby marking the end of another series of Montreal street cars. By coincidence this car was also No. 901.

The 901 type was designed by Mr. H.C. Taylor, Master Car Builder for the Company, who was responsible for designing and building many M.S.R. cars.

The general plan was similar to the 703 class, but with somewhat reduced dimensions. Length was 46'6" and width 8'5", compared to 51'10" and 8'9 $\frac{3}{4}$ " respectively for the 703's. Profiting from experience with the 703's, the rear platform was 7 feet instead of 9 feet long. As it turned out, the 901 series marked the stabilization of body dimensions inasmuch as a car of about 46 feet in length was found to be most suitable for Montreal conditions. The Company apparently thought very highly of these new cars. In its Annual Report for 1910 containing a review of transportation progress in Montreal, and comparing the new cars with the first electric cars, it says .... "They are built of steel almost entirely, on double trucks, just like steam railroad cars .... They are brilliantly lighted, equipped with electric push buttons to signal when a stop is required, furnished with electric heaters which preserve a comfortable temperature in winter, despite the everlasting opening and closing of doors, have easy cane seats, and run so smoothly that the returning worker in the evening can have the afternoon paper read before he reaches his dinner."

The outstanding feature of these cars was, of course, the steel construction. At that time car builders were beginning to use steel. The Pressed Steel Car Corp. had already delivered ten steel cars (Nos. 863 - 881) to M.S.R. in 1908 as part of the 703 group. However, steel body frames did not come into general use until the light weight designs were developed some years later. Without benefit of the skillfully designed steel framing that was to come later, Mr. Taylor, like others who were accustomed to working in wood, was most generous in his specifications for size and thickness of the steel members making up the structure.

The result was a heavy car weighing, fully equipped, close to 54,000 lbs. or nearly equal to the 703 type. In terms of dead weight per passenger carried, the 901's probably exceeded any Montreal city-type car before or since.

# Montreal Street Railway Co. ~ 901 CLASS CARS

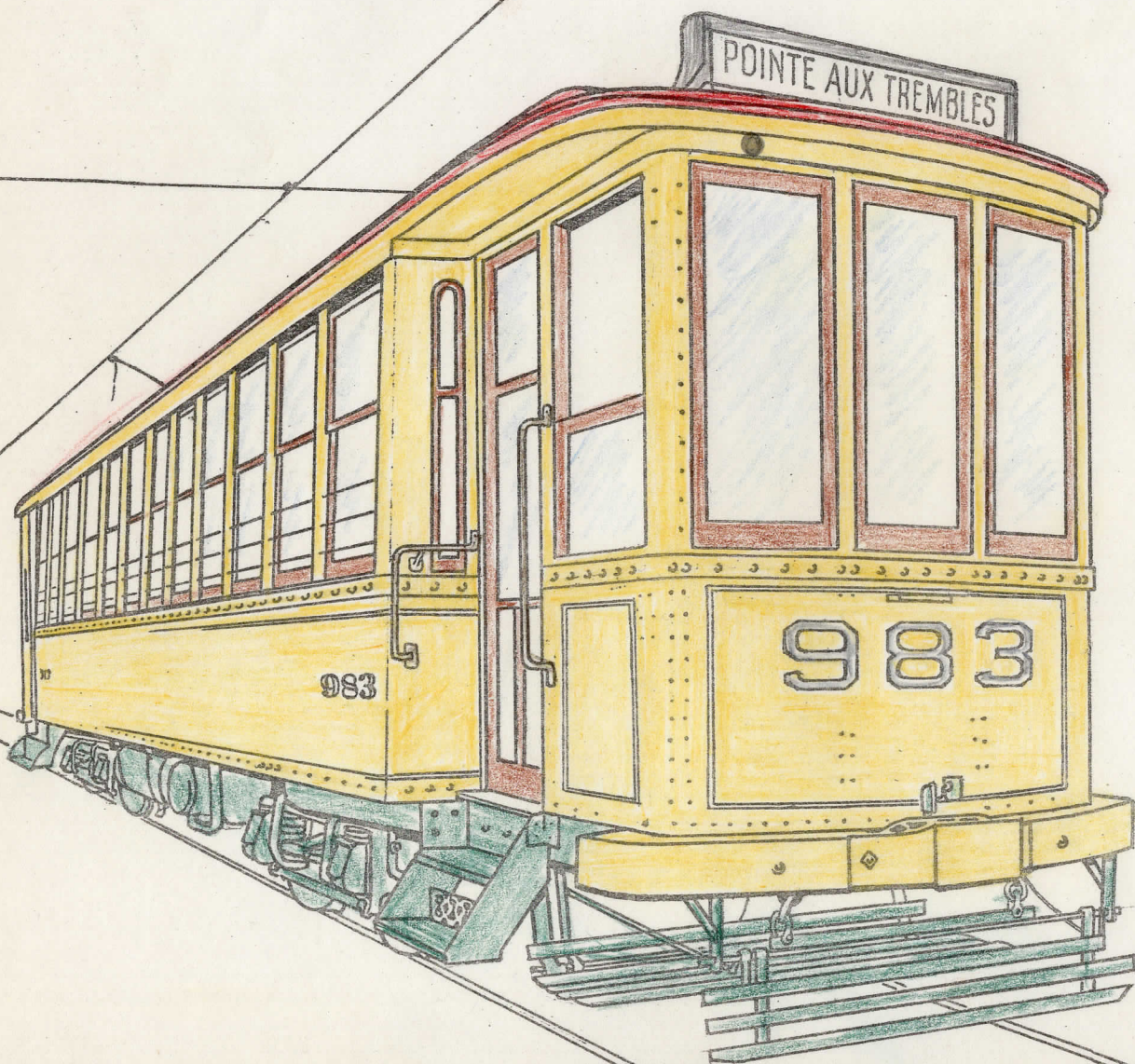
Fifty Cars, Nos. 901 - 999 Odd Numbers - Double Truck, Single End, Two-Man  
 Built by Ottawa Car and Mfg Co. - 1910, 1911

## GENERAL DIMENSIONS

Length overall .....	46'-6"
Length of body .....	32'-0"
Length of front platform ....	5'-0"
Length of rear platform ....	7'-11/2"
Truck centres .....	20'-8"
Width at eaves .....	8'-13/8"
Width at belt rail .....	8'-5"
Width of rear platform .....	6'-7"
Height: rail to roof .....	11'-11/2"
Height: rail to eaves .....	10'-13/4"
Height: rail to belt rail ...	5'-53/8"
Height: rail to side plate ..	2'-10"
Window post spacing .....	2'-71/2"
Weight .....	53,460 lbs.
Seating capacity .....	42

## EQUIPMENT

Trucks: Brill FE2, Mountain & Gibson  
 Wheels: Cast iron 33"  
 Axles: 5" standard  
 Motors: WH 101 and GE 80 (45 HP)  
 Control: K-28  
 Air Brakes: WH straight air  
 Door Mech.: Manual, hinged and sliding  
 Hand Brake: MSR staff brake  
 Hand Straps: Rico Sanitary Grip  
 Seats: Heywood-Wakefield, Rattan  
 Ventilators: Monitor deck sash  
 Floor covering: Hardwood slats  
 Int. finish: Cherry stain and varnish  
 Trolley base: Nutall Co. U.S. 11  
 Trolley wheel: Can. Ideal Co.  
 Gong: 12" foot operated  
 Glass: 21 oz.  
 Headling: Agasote



Because of the steel construction, which was not amenable to decorative mouldings, curves, or other embellishments, the lines of the 901's were rather severe, - even austere, especially for that period. To the average Montrealer of 1910, the most unusual feature of these new cars must have been the flat vertical sides. Up to that time, all M.S.R. cars were built with a divided side side panel, the lower half curving inward. Oddly enough, it was this feature of the 901's which made them appear, in later years, quite modern. The cars were received in two lots, tw'n in 1910 and forty in 1911. The last car went into service on November 14th 1911 (No. 987).

Bodies only were supplied by the builders. All equipment was purchased separately and installed by M.S.R. at Hochelaga Shops. The practice of using vacant numbers, formerly reserved for open cars, was continued with this series. Hence they bore odd numbers only (901-999 inclusive).

The 901's were first used on St.Catherine Street, but subsequently were operated on most main routes. Their only restrictions were the C.N.R. underpass on Wellington Street, because of non-clearance, and in later years the Westmount Blvd. and Cote des Neiges routes, because of the type of controller, which was unsuited to steep hills.

Apparently these cars were not a tremendous success as their use declined rather rapidly after the 1200 and 1325 classes were received. By the mid 1920's they were largely assigned to extra service only. Presumably, power consumption, track maintenance and other factors of operating expense precluded the 901's from taking a very prominent place in Montreal's street car cavalcade.

However, due to their weight and rugged construction, the 901 type was found to be ideally suited to suburban lines, particularly in winter. A number were equipped for suburban service, including a nose-plow in winter, and for many years these cars operated on the Pointe-aux-Trembles and Bout de l'Isle line, and, to a lesser extent on Machine and Cartierville lines. In 1927-28, seven of these cars (909, 911, 913, 925, 927, 929, 955) were equipped with pneumatic folding doors on the rear platforms, and the bulkheads removed. These seven were assigned regularly to the Pointe-aux-Trembles - Bout de l'Isle line, until bus substitution came in 1936.

As might be expected, none of the 901's were ever seriously damaged or required extensive rebuilding, partly because of their limited use and partly because in any encounter with other vehicles, the other fellow usually got the worst of it.

An undated photograph of No. 917 shows a large part of the rear platform constructed of slats with openings between. Presumably this was an experiment to get rid of snow and mud from passengers' feet before they entered the car. One can imagine this scheme was dropped because of the cold drafts and dust blown up from the road below on the legs of back platform habitues.

During the depression of the 1930's, the 901 cars were rarely seen, aside from the few which worked regularly on the Dte aux Trembles line. Nevertheless, the series remained intact until 1938 when six cars were scrapped (919, 933, 943, 983, 987, 989). The remaining forty four were used extensively for rush hour and war plant work throughout the war years.

In 1942, manually operated folding doors were installed at the rear and the bulkhead doors removed. In 1943, the cross-seats were turned to the longitudinal position to provide greater passenger capacity. Also in 1943, the single panel front exit door was replaced by a two-panel folding door.

After the war, substitution of buses began to eliminate this class. Eight were scrapped in 1950, three in 1952, eighteen in 1953, two in 1954, and the remaining twelve were removed from service in June of this year.

As undoubtedly some readers will discover, the above scrapping list adds to only 49 cars. A few years ago, one car (No.957) was fitted with spray painting equipment with nozzles directed downward from the rear corners for automatically marking rear swing clearance lines on the pavement. It is still used for that purpose. So, probably for the next two or three years on certain spring nights, between the hours of 2:00 AM and 5:00 AM, the "ghost will walk" and those abroad at that time may again see a 901 type car busily going about the streets of Montreal.

ACKNOWLEDGMENT: The line drawing and specification sheet which appears as page 90, was prepared by Mr. Binns.

#### MOTIVE POWER NOTES

Details are given hereunder of CANADIAN NATIONAL RYS' latest locomotive order:

Class	Numbers	Service	H.P.	Builder	Assignment
GS-12e	7020-30	Switcher	1200	GMDL	Canadian National
MS-10g	8036-77	"	1000	MLW	"
MS10h	8078-79	"	1000	"	"
MS-10j	8080-81	"	1000	Alco	Central Vermont
"	8082	"	1000	"	Grand Trunk Western
MS-10k	8083-90	"	1000	"	"
MR-10b	1549-54	Road Sw'r	1000	MLW	Canadian National
CR-12f	1640-59	"	1200	CLC	"
GR-17d	1768-76	"	1750	EMD	Grand Trunk
MR-16e	1863-69	"	1600	MLW	Canadian National
MR-16f	1870-77	"	1600	"	"
MR-16g	1878-80	"	1600	"	"
MR-16h	1881-85	"	1600	"	"
GR-17f	2000-44	"	1750	GMDL	"
GR-12f	2300-20	"	1200	"	"
GRG-17e	1777-81	"	(G) 1750	EMD	Grand Trunk
CRG-24a	3000	"	(G) 2400	CLC	Canadian National

(G)- indicates equipped steam generator.

Following the foregoing order, Canadian National ordered three 400 horsepower road switchers from General Electric Co. for delivery next summer. These units are to be classified ER-4b, and bear numbers 1502-1504.

As already noted in a previous issue, engine #3000 ("Trainmaster") has been delivered. It is presently in use between Montreal and Toronto in freight service. Delivery has now started of classes MS10g (8039 received), MR-16g (1863 received), and GR-17f (2001 received).

Also, Canadian National Railways has received Budd car No.D-101, an RDC-3 type unit, which will be placed in service shortly between Edmonton and Calgary. It is understood that the car is being altered slightly by having the partition between the mail and baggage compartments removed, to form a large baggage compartment. (Ed.- Can this therefore be called an RDC-2 $\frac{1}{2}$  ?)

Members in the Montreal area, of several years' standing will be interested to know that rail car #15837, which was used on several very enjoyable excursions out of Montreal in 1950 and 1951 by the Association, was recently transferred to western lines to operate between Prince Rupert and Kitimat via Terrace, BC. While in this service, it sustained extensive damage to the engine, which will probably result in its permanent withdrawal from service.

It is reported that the electric passenger cars of the Grand River Railway and Lake Erie & Northern Railway, Canadian Pacific subsidiaries, whose passenger service was withdrawn last April, have been purchased by the Chicago, South Shore & South Bend Railway, an electric interurban line operating out of Chicago. The steel cars only, are affected by this sale.

Canadian Pacific Railway engine 526, late of Orangeville, Ontario, reported withdrawn from service in our last news report, was scrapped at Angus Shops, Montreal late in October, bringing the D6 class to an end.

oo00oo00oo00oo

CN	RAC&HBNARC	PRGWDP	GEC&GT
R			H
&			&
C			B
S			N
&			J
L&PSQNS	&IMCR	&PRSA	&JQGRONR

NOTES & NEWS

THE TWO-CAR Budd RDC train which the Canadian Pacific Railway recently introduced between Montreal and Quebec appears to be inadequate, judging by the frequent appearance of a train replacing it, consisting of a "jubilee" type steam locomotive, the two RDC cars and two additional coaches. On

the first few occasions when this train operated, the two regular coaches were stainless steel cars of the 100 series, designed evidently to harmonize with the RDC cars. Conventional 2200 class cars were later used.

Several of the Canadian Pacific Railway's older self-propelled gas electric cars of the 9003 series have lately made their appearance at Angus Shops, after having been withdrawn from service for several years. This may indicate that reconditioning is being considered for these cars.

Board of Transport Commissioners has authorized the Central Vermont Railway to abandon the St.Armand Subdivision, extending between Iberville, Que. and the International Boundary north of Highgate, Vermont. This will undoubtedly result in the discontinuation of the Richelieu bridge by the CNR between St.Johns and Iberville, and the 9/10 mile Lemoyne Subdivision, between the Central Vermont and the Canadian Pacific connections in Iberville, Que. The St.Armand Subdivision in former years was the route of the principal Montreal- U.S. trains via the Central Vermont Railway, while the Lemoyne Subdivision, in the days when CNR Montreal-to-Waterloo service ran over CPR tracks between Iberville and Farnham, Que. bore the unique distinction of having all trains operate reversing (i.e. with engine pushing) in either direction.

Chesapeake & Ohio Railway is reported to be considering establishing a passenger train service between Chatham and Sarnia, Ont. by way of Wallaceburg.

Canadian National Railways was recently empowered by the Board of Transport Commissioners to drop passenger and mail service during the summer months between Bathurst and Tracadie, NB, 72 miles, but ruled that CNR would have to provide service between November 15th and April 15th, each year.

While the Canadian National Railways' new line between Hillspport, Ont. and the new mining properties at Manitouwadge was completed and officially opened last July 27th, Canadian Pacific's line to that point, which leaves the main transcontinental line near Hemlo, Ontario, was officially opened on October 19th.

The new railway connecting Wabush Lake, Labrador with the Quebec North Shore & Labrador Railway at Mile 224 from Sept Iles, is reported to be presently under construction, and scheduled for completion next spring. Work will continue through the winter.

Apparently emulating the French National Railways' pioneer operation of a crewless train by remote control last April 18th between two points on the Paris-Le Mans main line, the New Haven Railroad is planning a similar experiment between New Rochelle NY and New Haven, Conn. by controlling a crewless train by electronics from a truck on an adjoining highway.

## PART VII

### CROSSING THE RIVER

by Robert R. Brown

Pumping the water out of the weals of the cofferdams presented numerous difficulties, and the operation was not as simple as one might suppose. About half of them were reasonably water-tight

from the beginning but others leaked badly. At pier No.3, the bed of the river was 10 feet lower on one side than on the other, and the whole summer was spent overcoming the difficulty. In many cases, a sudden influx of water would cause the workmen to abandon their tools and scurry up the ladders provided for their escape. Dams nos. 8 and 9 could not be pumped out, and when a diver went down in the still water to ascertain why the pumps

CANADIAN RAILROAD HISTORICAL  
ASSOCIATION, INC.

News Report No. 61  
November, 1955

Editorial Address:  
P.O. Box 22, Station "B",  
Montreal 2, Canada.

Editor: Omer S.A. Levallee  
Asst. Editor: R. Douglas Brown  
Committee: Robert R. Brown,  
Kenneth Chivers  
Anthony Clegg  
Ernest Modler

made no impression on the level, he found that the cofferdam was resting on a pile of round boulders which the sheet piling could not penetrate. These stones had to be removed by the difficult and laborious process of divers going down and attaching grappling irons to each stone, to be then removed by powerful derricks above. The stones weighed from three to fifteen tons and one was found to weigh thirty tons.

The pumps used by Mr. Hodges consisted of two cast-iron cylinders, about 18 inches in diameter, and placed vertically, side by side, with their piston rods connected by a bell crank, working them alternately. They were very efficient but their large size crowded the limited working space on the deck; the vibration was so severe that it often caused the short piling to loosen. A flexible suction hose led down into the well to the bottom of a sump, to which all surface water was conducted.

Several of the sub contractors used centrifugal pumps which were very efficient except when chips of wood or other small obstructions were drawn into them. The size of the shell varied from 15 to 24 inches in diameter and six to nine inches in depth. The pumps were held by light iron or wooden frames and were lowered to the bottom of the well, thus doing the work while submerged; power was transmitted from a shaft extending downwards from the deck. When the well was completely emptied, a sump was excavated and the centrifugal pump lowered into it.

Both types of pumps working at normal speed could throw out 800 to 1000 gallons a minute, lowering the water in the inner well of the dam at the rate of two feet an hour, and taking from three to ten hours to empty it entirely.

INCREASED CIRCULATION OF THE ASSOCIATION'S  
PUBLICATIONS MEANS BIGGER AND MORE INFORM-  
ATIVE NEWS REPORTS AND BULLETINS.

IF YOU HAVE A FRIEND OR ACQUAINTANCE WHO  
COULD BE A PROSPECTIVE SUBSCRIBER, SEND IN  
HIS NAME AND ADDRESS TO THE EDITORIAL  
COMMITTEE AND A SAMPLE NEWS REPORT WILL  
BE SENT PROMPTLY TO HIM.

LET'S ALL COOPERATE TO INCREASE OUR  
CIRCULATION IN 1956 !