

# Canadian Rail



No.386  
MAY-JUNE 1985







# CANADIAN RAIL

Published bi-monthly by the Canadian Railroad Historical Association P.O. Box 148 St. Constant P.Q. J0L 1X0. Subscription rates \$23.00 (US funds if outside Canada)

ISSN 0008-4875

EDITOR: Fred F Angus  
CO-EDITOR: M. Peter Murphy  
OFFICIAL CARTOGRAPHER: William A Germaniuk  
LAYOUT: Michel Paulet

#### FRONT COVER:

*On November 22 1952 the last run of a "first generation" Pay-As-You-Enter car was made in Montreal. This was a C.R.H.A. excursion using car No. 859 built in 1906. Here we see the car returning on the private right-of-way from Montreal North. Track and trees are long gone, destroyed for the widening of Henri Bourassa Blvd, but car 859 is still around, the last survivor of its era.*

*Toohey Collection, C.R.H.A.*

#### INSIDE FRONT COVER:

*The original "Pay-As-You-Enter" concept in full action! All kinds of people boarding and alighting from Montreal street car 857 in 1907. The sign above the window reads "PLEASE PAY AS YOU GET ON — VEUILLEZ PAYER EN MONTANT" while the small notices glued to the window glass say "Passengers MUST NOT remain in entrance space on platform — Les voyageurs NE DOIVENT PAS stationner a l'entrée de cette platte-forme" Car 857 was identical to 859 which has been preserved.*

*C.R.H.A. Archives. M.U.C.T.C. Collection.*

NEW BRUNSWICK DIVISION  
P.O. Box 1162  
Saint John,  
New Brunswick E2L 4G7  
ST. LAWRENCE VALLEY DIVISION  
P.O. Box 22 Station 'B'  
Montreal, Que. H3B 3J5  
BYTOWN RAILWAY SOCIETY  
P.O. Box 141, Station A  
Ottawa, Ontario K1N 8V1  
TORONTO & YORK DIVISION  
P.O. Box 5849, Terminal A,  
Toronto, Ontario M5W 1P3  
WINDSOR-ESSEX DIVISION  
300 Cabana Road East,  
Windsor, Ontario N9G 1A2  
GRAND RIVER DIVISION  
P.O. Box 603  
Cambridge, Ontario N1R 5W1  
NIAGARA DIVISION  
P.O. Box 593  
St. Catharines, Ontario L2R 6W8  
RIDEAU VALLEY DIVISION  
P.O. Box 962  
Smiths Falls, Ontario K7A 5A5  
ROCKY MOUNTAIN DIVISION  
P.O. Box 6102, Station C,  
Edmonton, Alberta T5B 2N0  
CALGARY & SOUTH WESTERN DIVISION  
60 — 6100, 4th Ave. NE  
Calgary, Alberta T2A 5Z8  
CROWSNEST & KETTLE-VALLEY DIVISION  
P.O. Box 400  
Cranbrook, British Columbia V1C 4H9  
PACIFIC COAST DIVISION  
P.O. Box 1006, Station A,  
Vancouver, British Columbia V6C 2P1  
KEYSTONE DIVISION  
14 Reynolds Bay  
Winnipeg, Manitoba R3K 0M4

# P.A.Y.E. - 80

## A Montreal Invention. 1905-1985

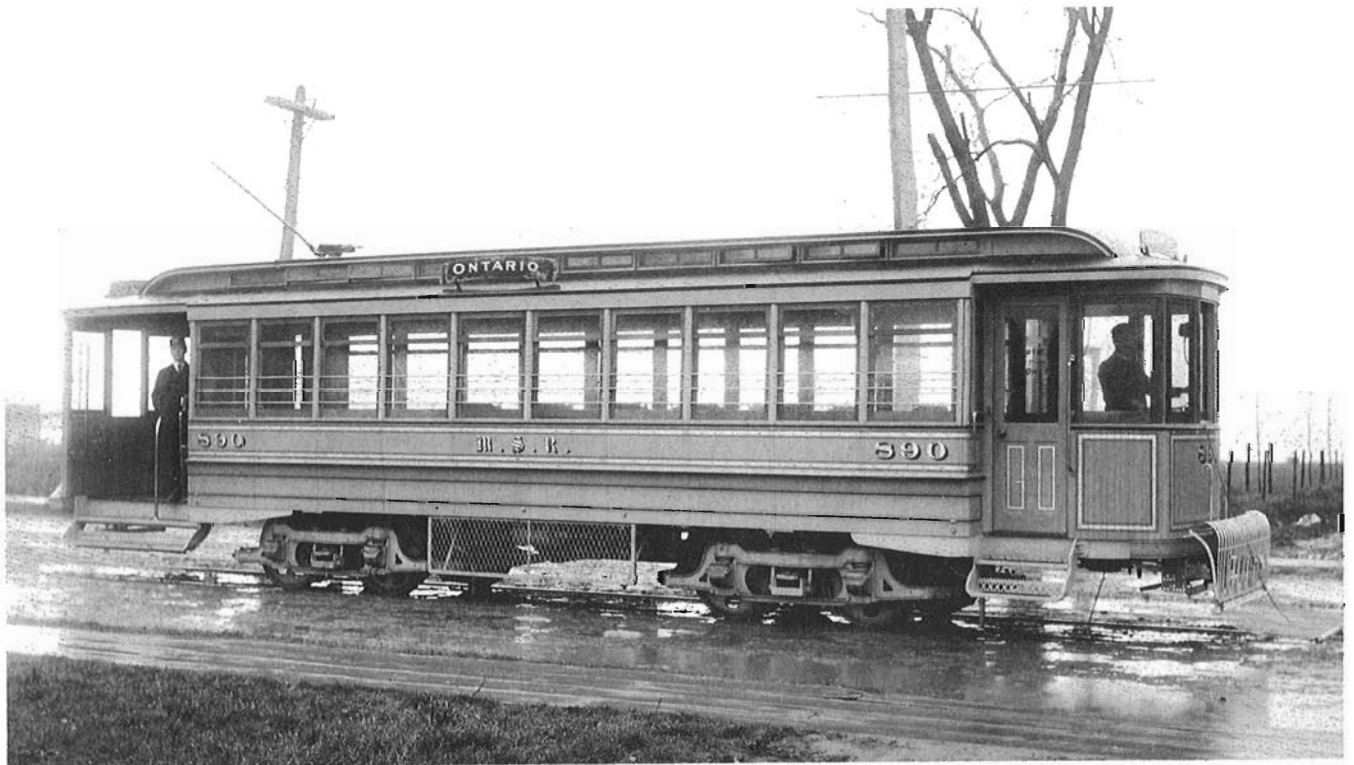
by FRED ANGUS

Eighty years ago! May 1905. It was the middle of a decade which has been called "The Good Years". This was the Edwardian era, Sir Wilfred Laurier was Prime Minister of Canada, and Theodore Roosevelt was President of the United States. In this month of May an event took place in Montreal which would have a profound influence on transit systems throughout the world. The Pay-As-You-Enter (P.A.Y.E.) fare collection system was introduced.

The first decade of the twentieth century was the high point of the trolley era. In less than twenty years electric traction had grown from a few experimental installations to a vast industry comprising many systems of urban and interurban railways carrying billions of passengers annually. Seldom has such a major technology grown so fast. Even the most popular song of 1905 "Wait Till the Sun Shines Nellie" carried

the line "How I long she sighed for a trolley ride". The trolley was THE way to go. These were the days of unbounded optimism, times were good, the depressions of the nineties were fading memories and the panic of 1907 had not yet happened. The world wars were well in the future and, although there was war between Russia and Japan, this was far away, seemed to have little effect on North America and would end that summer. The automobile had not yet become a significant factor in mass transportation and the future of the electric street car systems seemed bright indeed. There appeared to be no limit to its potential development; the time was ripe for progressive innovations.

With all this development, and in spite of the vast number of passengers carried, one thing was strangely unchanged. Ever since the earliest horse cars the



*The world's first pay-as-you-enter car, Number 890, on its first trial run, May 5 1905.  
M.U.C.T.C. collection, C.R.H.A.*

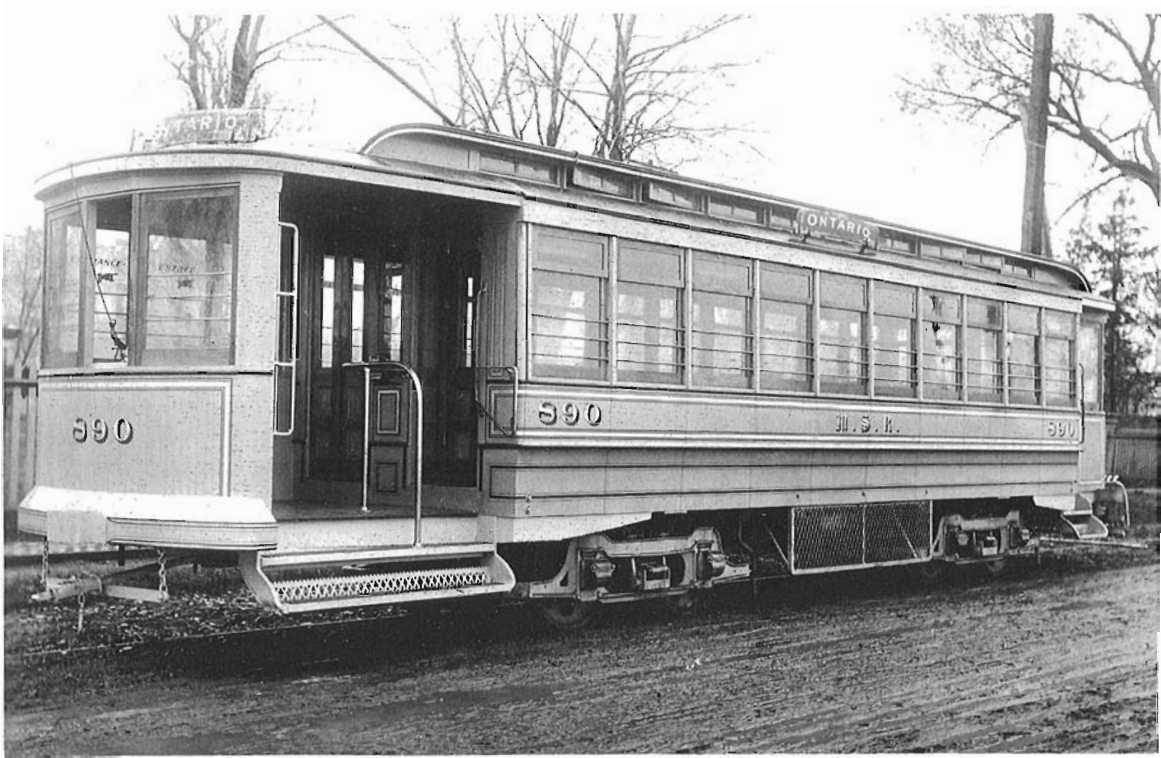
method of fare payment was the same; a passenger got on, found a seat (or stood if one was not available) and the conductor came around and collected fares. Some horse car systems had tried fare box cars which dispensed with the use of the conductor, but these were unpopular and suitable only for lightly-travelled lines. By 1905 cars were much larger and faster but the fares were collected in the same old way; the result was inevitable, service was slowed and many fares were missed altogether.

In theory it sounded easy to collect the fares as a passenger boarded, just station the conductor at the door of the car. The trouble was that this meant that only one passenger could board at a time and service would be slowed even more, especially at busy stops where many were boarding. In 1905 Messrs. Duncan McDonald and W.G. Ross of the Montreal Street Railway developed a new and, in retrospect, surprisingly simple idea: Provide two doors in the rear bulkhead, one for entrance, one for exit. Station the conductor on the rear platform between these doors and provide a large rear platform. That way entrance would only be at the rear, passengers could board quickly, the car could then start and the fares would be picked up as the passengers passed through the doorway from the open platform into the interior of the car. The platform was made large to hold all the passengers that would be expected to get on at any stop. Exits were provided at both front and rear and for that reason the front platform was also made larger to permit egress there without disturbing the motorman.

The idea of two doors in the rear bulkhead was not new; the Brownell Car Company of St. Louis Missouri had called this the "Accelerator" principle and had patented it in November 1891. In fact the first electric car in Montreal, number 350, the "Rocket", was an "Accelerator" straight off Brownell's production line in 1892. Nevertheless, most trams in use in 1905 still had only one door in each bulkhead. What WAS new in Ross and McDonald's scheme of 1905 was combining three features, each of which had been tried singly before, namely double doors, long platform and conductors post, so creating a workable pay-as-you-enter system, the first such workable system in the world.

For several years prior to 1905 the Montreal Street Railway Co. had been building cars in its own shops and some were actually under construction then. One of these, No. 890, was chosen to be the "guinea pig" and on May 4 1905 it emerged from the shops bearing all these features, that is it became the world's first pay-as-you-enter street car. While there was some criticism of the new idea, No. 890 soon proved that the basic design was sound and that the system was here to stay. Unfortunately fate intervened on May 22 when car 890 was involved in a tragic accident in which one person was killed and the car badly damaged. However this was not due to any faults of the P.A.Y.E. system and a month later the car was back in service. In the meantime a few changes had been made. It was no longer No. 890, but had been renumbered 900 so starting a whole new series and, hopefully, erasing any

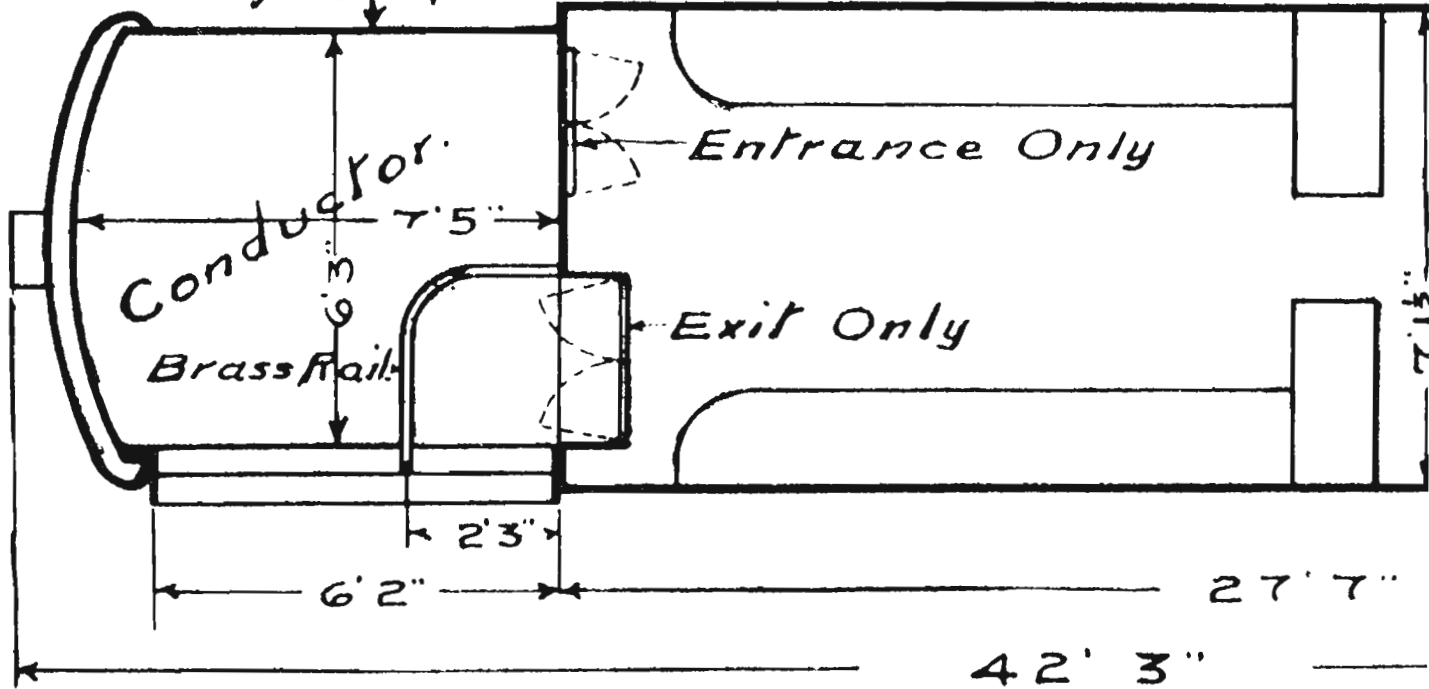




This three-quarter rear view of car 890 shows clearly the platform layout in its original form.  
M.U.C.T.C. collection, C.R.H.A.

Sign:-

Please Pay As You Get On



THE MONTREAL STREET RY. CO.'S

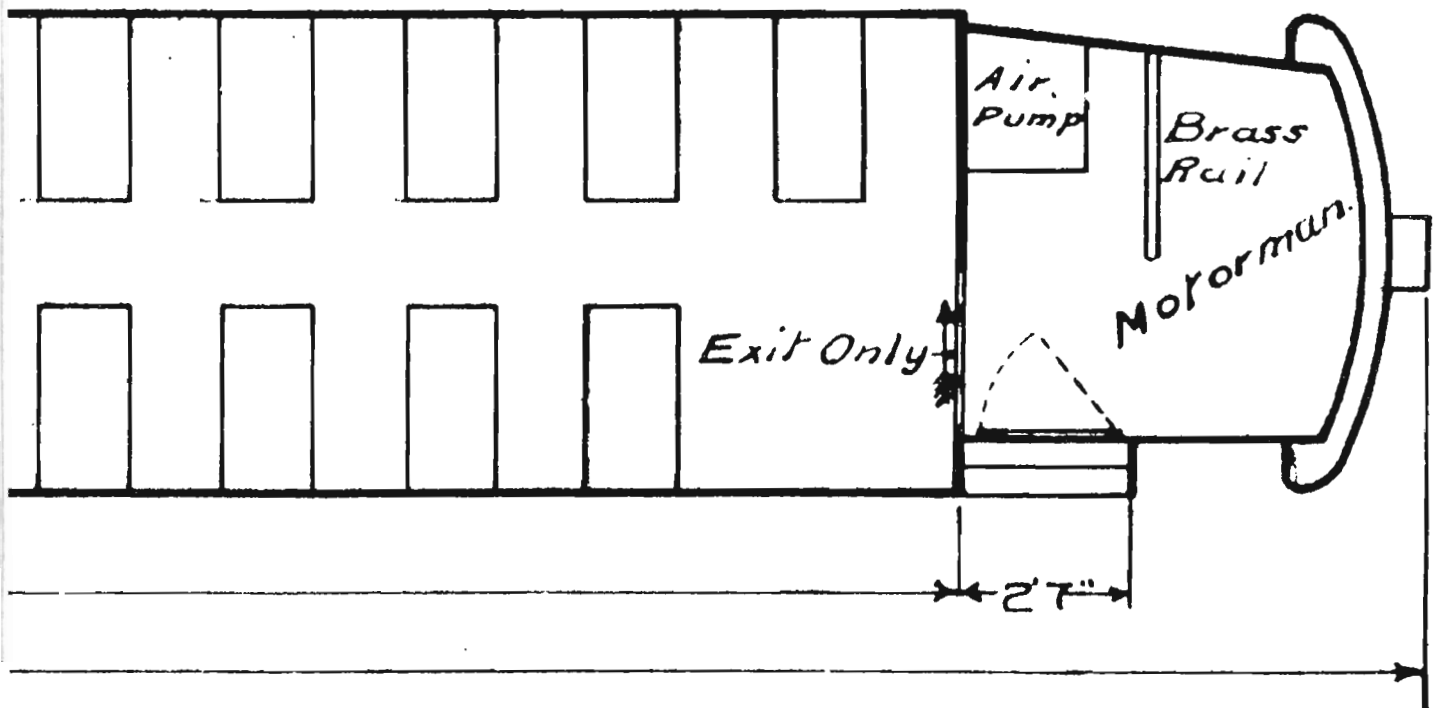
A plan view of car 890 as built. This plan was published in the magazine *Railway and Shipping World* in June 1905.

C.R.H.A. archives.

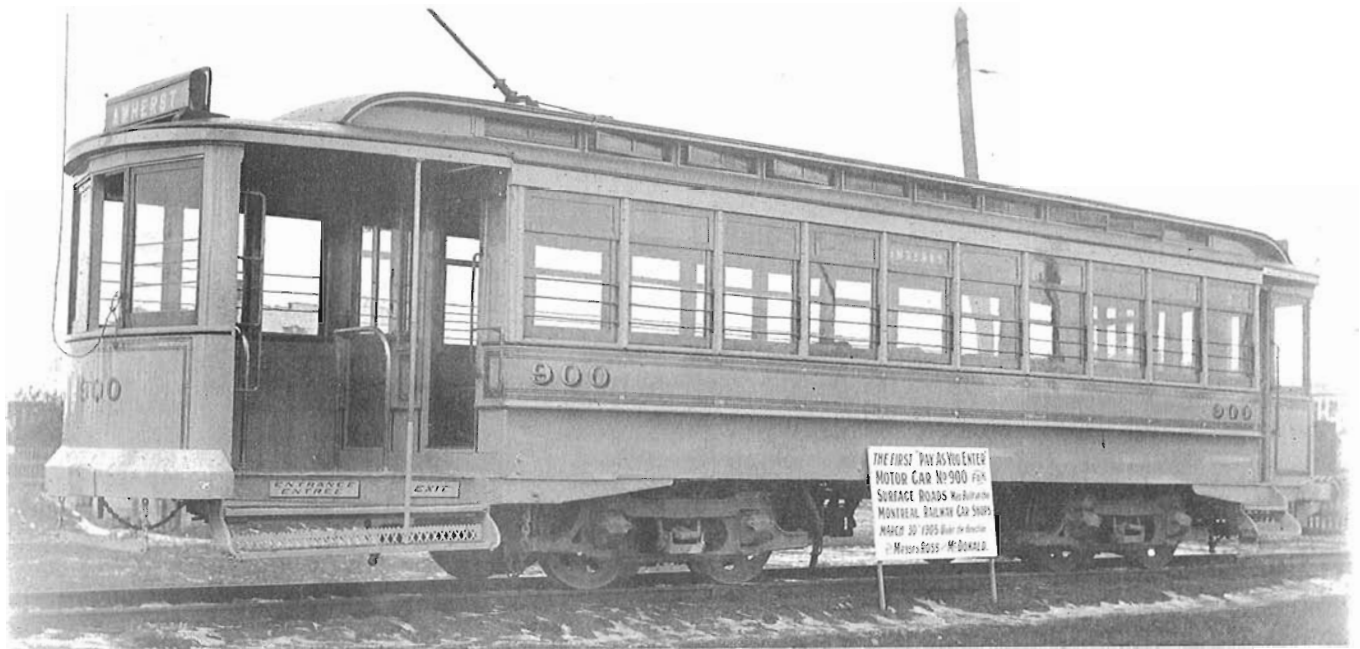
superstition attached to 890 as a result of the accident. Another shortcoming of the system had also been eliminated. Since it was expected that P.A.Y.E. and non-P.A.Y.E. cars would be in use together for years to come, there had to be some way of distinguishing the newer cars at a distance so passengers could have their fare ready. This was done by painting the car number on the front dash in large squarish silver numerals on a bright red rectangular background. So was created the typical "first generation" P.A.Y.E. car, the epitome of Edwardian urban transportation, of which 116 were built, in various sub-classes, between 1905 and the middle of 1908. The type was distinguished by being a wooden, curved-sided, clerestory roof car painted in light chrome yellow with silver trim and with the distinctive red rectangle in front bearing the large silver numbers. This latter feature made a most interesting contrast to the chrome yellow and was an indication visible for several blocks.

During the remainder of 1905 and early 1906 twenty-five more cars of the 900 class were built and proved highly successful. Earnings per car were found to be at least 10% higher than with the similar size non-P.A.Y.E. cars, showing how many fares must have been

missed the old way. The 900 series itself consisted of a total of 26 cars extending as high as number 950 (even numbers only). By 1906 the success of P.A.Y.E. was assured and it was realized that larger cars could be used. Car 940 was built as an experiment and was 53 feet long including a 10-foot rear platform. The company thought highly of this car and it was exhibited at the American Street Railway Association convention in Columbus Ohio in September 1906 where it received great praise. As a result of all this, two decisions were made. It was decided to order 90 new cars the same as 940, and also to convert many of the older trams to P.A.Y.E. The new cars were numbered 703 to 881 odd numbers and went into service between late-1906 and mid-1908. Ten of these were among the world's first steel street cars, but that is another story. The older cars converted consisted of most of the double-truck closed trams constructed between 1900 and 1904 as well as some of the newer single-truckers going back as far as 1896. Some were not converted, notably the open cars, the pre-1896 closed cars and the centre-entrance "Scotch cars" which were, however, eventually converted in 1912.

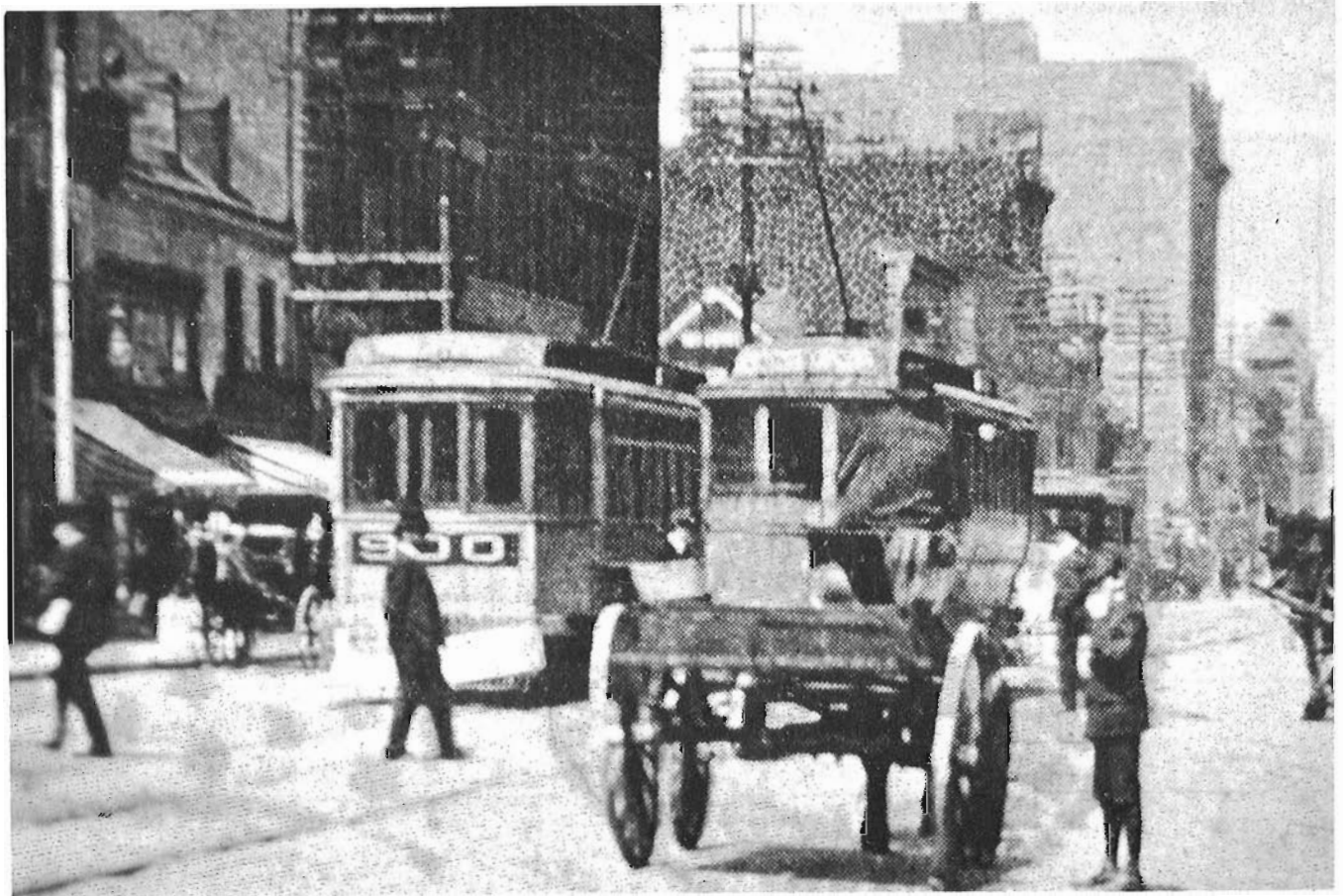


NEW STANDARD CAR—FLOOR PLAN.



*Car number 890 was soon renumbered 900 following the accident of May 22. This photo was taken in 1910 and shows a few changes in the intervening five years, notably signs, simpler striping and removal of side guard gratings.*

*M.U.C.T.C. collection, C.R.H.A.*



*The only known photo of car 900 in service after its inaugural run. This photo was taken at the corner of Craig and Bleury streets about 1910 and is copied from an old post card printed in Germany!*

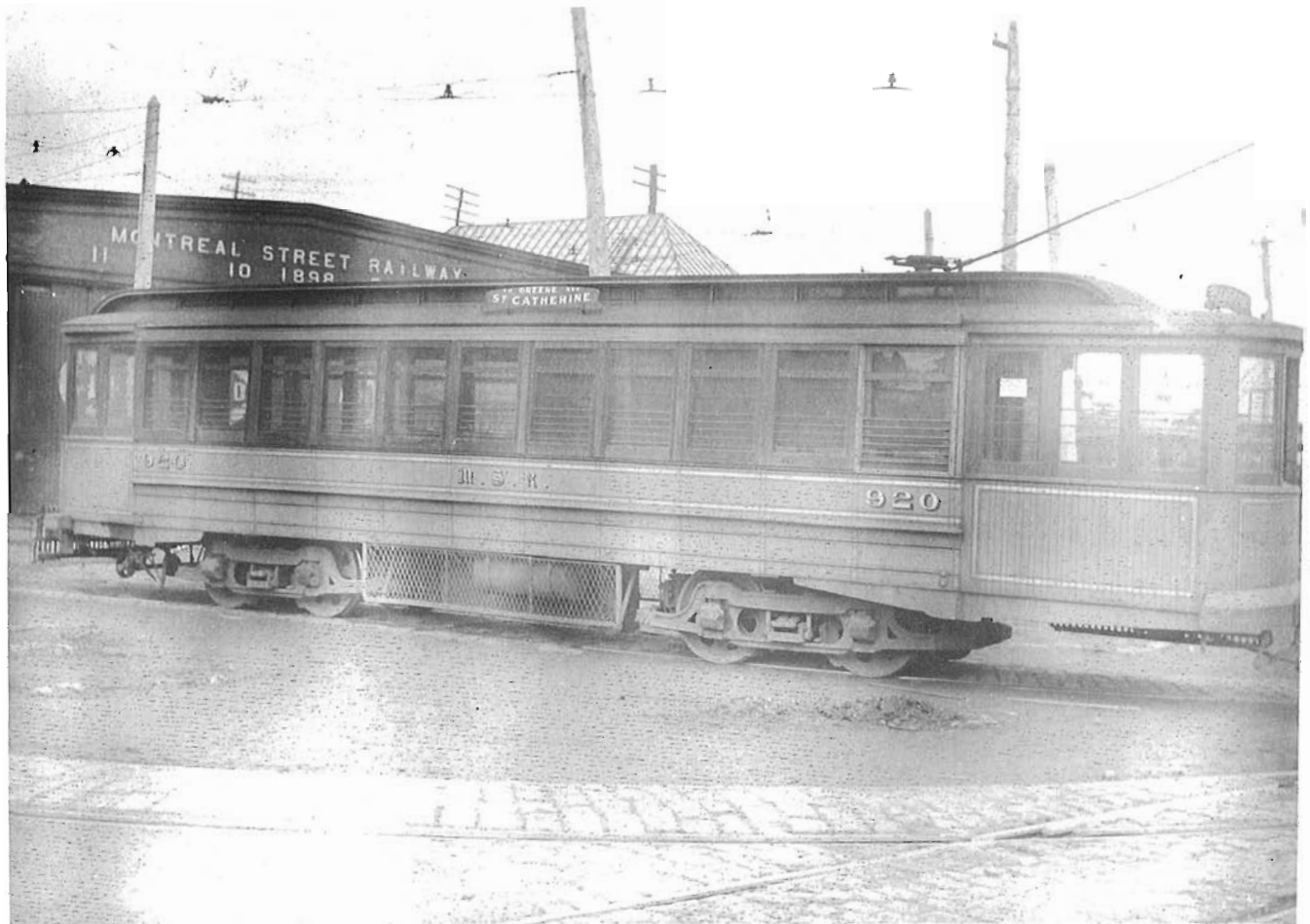
*Collection of Fred Angus.*



The delivery of the last units of the 703 class in the summer of 1908 completed the "first generation" of P.A.Y.E. cars. So many new trams had been placed in service since 1904 that there would not be any need for new equipment for almost two more years especially in view of the sharp but short depression following the panic of 1907. During this time it is evident that some thought was being given as to what modifications might be made for the next cars. The 703's were found to be a bit too long, especially the 10-foot platforms (which were eventually shortened by two feet in 1913 and 1914), and various possibilities were considered. By 1907 other cities were adopting their own versions of the basic Montreal P.A.Y.E. car and out of this came a very intriguing and mysterious possibility, now known only from a very rare photograph, which would have been very different from anything ever seen in Montreal. In 1907 Chicago took the P.A.Y.E. concept to heart in a big way ordering 300 double-enders, 48 feet long, described as "1905 Montreal standard design P.A.Y.E. car". A builder's photo, from the G.C. Kuhlman

Car Co. of Cleveland Ohio, exists depicting one of Chicago's first P.A.Y.E. cars (the so-called "Big Brills", Nos. 5301 to 5600 built in 1907 and 1908) but painted and lettered in the full Montreal P.A.Y.E. paint scheme, complete with red rectangle (on both ends), side lettering "M.S.R." and sporting the number 901! It is known that Kuhlman built 20 cars for Montreal (numbers 823 to 861 odd numbers) in 1906 and 1907 on sub-contract for Brill of which firm Kuhlman was a subsidiary. Perhaps this "901" was merely an attempt to obtain new business with the Chicago design, some of which were under construction in the same factory at the same time, but perhaps also the M.S.R. directors really were thinking of double-enders. There is no evidence that this car ever came to Montreal but it is not impossible that it did come, on test, for a short time. In any event the design was not used in Canada, Kuhlman built no more cars for Montreal, although parent-company Brill did later in 1914 and 1917.

Eventually the two-year hiatus came to an end in May 1910 when the first of the "second generation"



*A rare left-hand view of a 900-class car showing the long rear platform  
M.U.C.T.C. collection, C.R.H.A.*



*Two 900-class cars passing each other on Ste. Catherine street about 1907. This clearly shows the end configuration and the big front number panel. Note the very small clearance between the cars; the track had been laid out with the older, narrower cars in mind.*

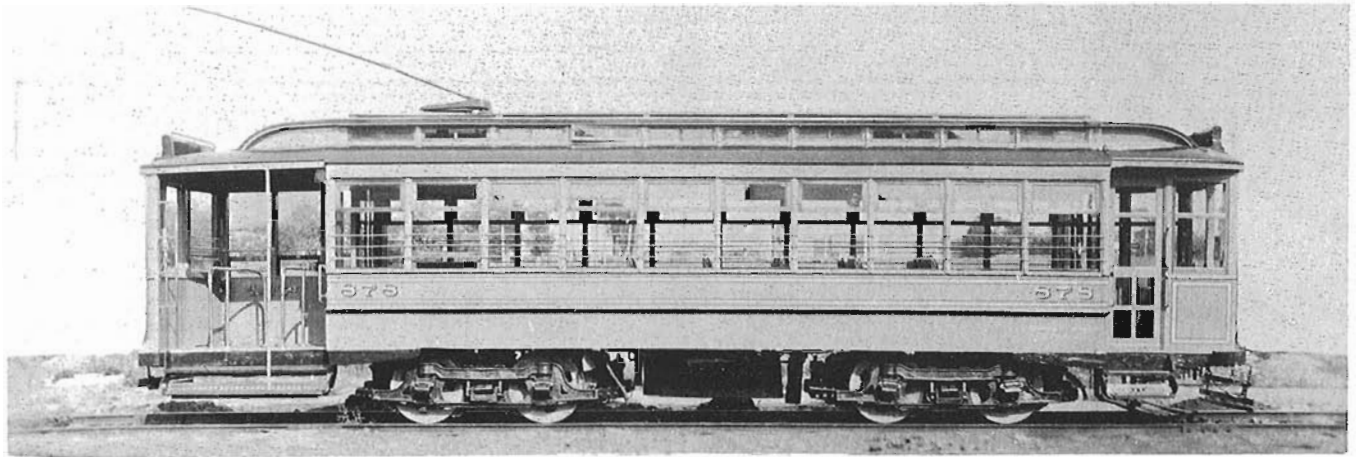
*M.U.C.T.C. collection, C.R.H.A.*



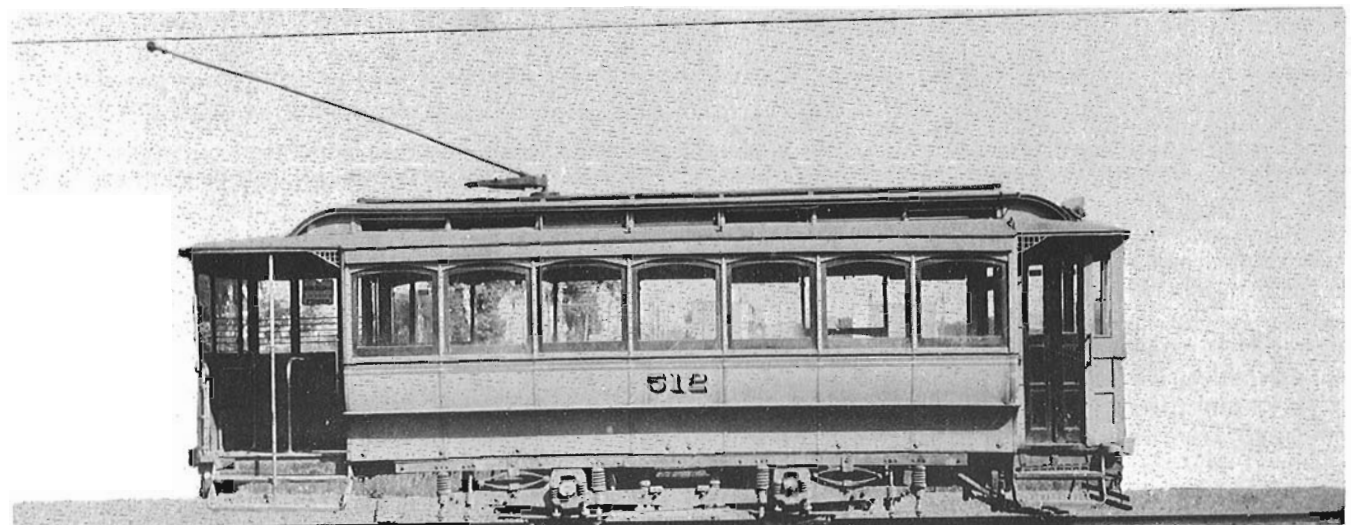
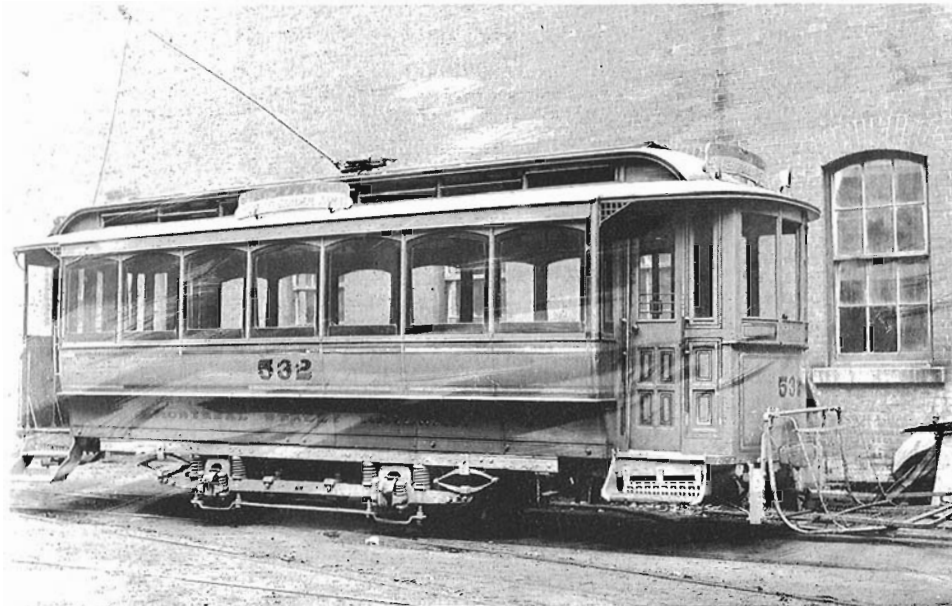
*Soon after the 900's were built, many of the older cars were converted, starting with the newest and working back. Here we see No. 854, only a year old when converted to P.A.Y.E.  
M.U.C.T.C. collection, C.R.H.A.*

P.A.Y.E. cars, the "real" 901, went into service. These were Canadian-built, all steel, more modern looking trams somewhat smaller than the 703's but of the same general appearance since the company had decided that the basic design was good and there was no need for radical changes. The 901's (Nos. 901 to 999 odd numbers) were delivered in 1910 and 1911 and were soon followed by the lighter-weight 1200 series of 125 cars (1200 to 1324) delivered from late-1911 to mid-1913. These were the last cars ordered by the Montreal Street Railway, which had become the Montreal Tramways Co. by the time they were delivered, and they were also the last of the classic "Montreal Roof" design of street car. All further orders were, of course, for P.A.Y.E. cars, but they were of more modern design and of even lighter weight than the 1200's. Most of the later cars had folding rear doors

instead of open platforms with bulkhead doors, many of the older ones were so converted but many others remained open until the 1940's so one could still board "on the fly", a rather dangerous practice as traffic got heavier! In the 1920's one-man operation became more and more used; this was, of course, totally dependant on P.A.Y.E., but by now the system had become rather different than in 1905. Meanwhile the outward appearance of the cars themselves was changing. First to go was the red rectangle as it was felt that there was no need for such a highly visible indication. This change came about in 1913 when the large silver numbers were painted directly on the yellow background. This was, however, a short-lived scheme used mostly on new cars built in 1913, in fact there is no known photo showing it on an older car although it may have been used. Then, late in 1913 the



*A broadside of car 878 showing how it appeared after conversion.  
Collection of Omer Lavallée.*



*The conversion program extended as far back as the newer single-truck cars. The "504" series were built in 1897. Here we see 532 "before" and 512 "after" conversion. The long rear platform looks a bit out of proportion on such a small car.*

*Car 532, M.U.C.T.C. collection, C.R.H.A.  
Car 512, Collection of Omer Lavallée.*

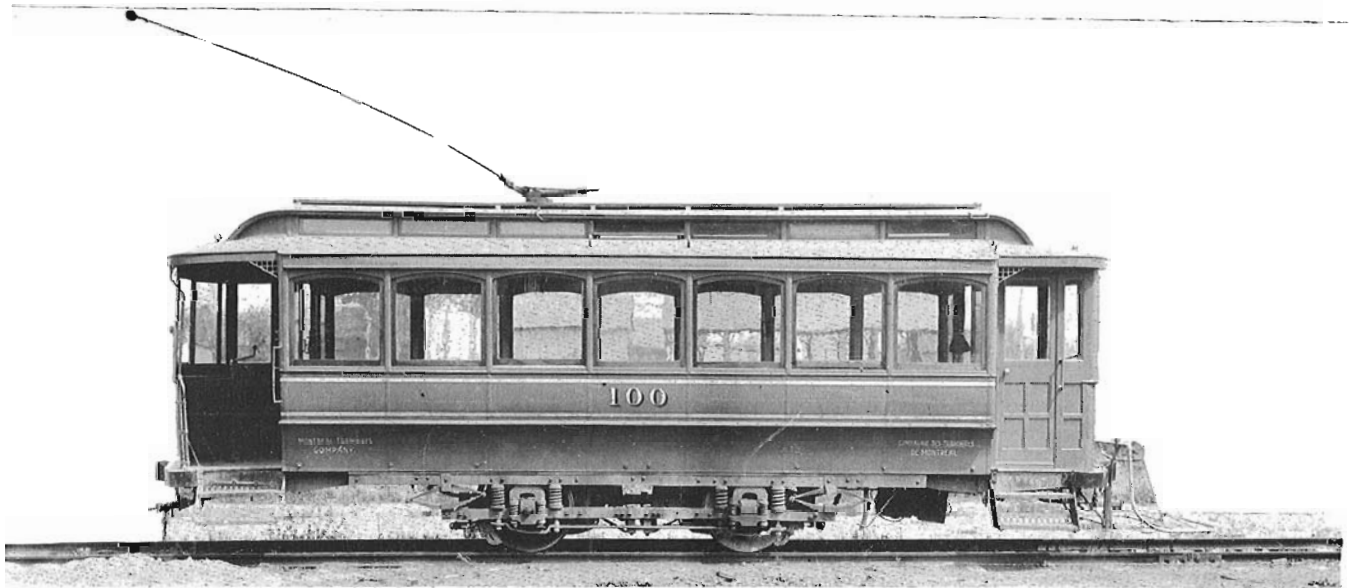
familiar green paint scheme with gold (later yellow) lettering was adopted, probably because it did not show the dirt so much. This marked the end of the "classic" Montreal P.A.Y.E. car. In eight short years it had evolved from something new and untried into a highly successful concept used across America and much of the world.

The original P.A.Y.E. cars remained in service for a long time, in some cases as long as 45 years. First to be retired were the single-truck cars built up to 1900 and converted after 1905; many of these went in the late 'teens, and they were almost entirely gone by 1925. The older double-truckers were displaced by the many new lightweight cars built between 1926 and 1930. Meanwhile, the newer open-platform cars such as the 1200's and some of the 901's had folding rear doors installed and the bulkheads removed. The depression years of the '30's took a heavy toll of these old cars. During this time the even-numbered 900's and many of the 703's were retired; the once-famous 900 (formerly 890) went to the scrap pile in 1933, a now-forgotten pioneer whose day was done. By 1939 there were still 55 of the 703's, 44 of the 901's and all 125 of the 1200's still existing as well as number 922 which was in work service. Among these was a group of cars (including 859) that were awaiting scrapping when they were reprieved by the outbreak of war. Strangely the large square front numbers remained on all the older cars through many re-paintings although all post-1914 trams had the standard small numbers and there was no longer any need for distinguishing indicators. Even the striping on the wooden cars was more ornate,

a faint reminder of the former days of elegance. It was not until the mid-1940's that the last large number and fancy striping was painted over and replaced by the standard design for all two-man cars.

During World War II these trams had a new lease on life as every available street car was pressed into service. Those that still had the open platforms had folding doors installed in 1942, and no further cars were scrapped until the late 1940's. But in the early 1950's retirements proceeded more rapidly; 922 was scrapped in 1950, the 703's were all retired by late 1952, the 901's by mid-1955 and the last of the 1200's, No. 1220, came out of service in June 1956. The final run of a true "first generation" P.A.Y.E. car had come on November 22 1952 when No. 859, one of the Kuhlman-built cars of 1906 - 07, ran on a C.R.H.A. excursion to Montreal North and back. When it returned to Youville shops that afternoon an era had ended!

What is now left of the early P.A.Y.E. cars? Very little; four cars to be exact, all of which saw more than four decades of service on Montreal's streets, but only one of which is of the classic wooden car design. Car 1317 ran from 1913 to 1956 and is now at the Canadian Railway Museum in the condition in which it last ran. 997, in service from 1911 to 1955, was repainted in 1956 in an approximation, albeit too light coloured, of the chrome yellow of pre-1913 days complete with silver numbers and red rectangle. It is also at the Canadian Railway Museum. No. 957, in passenger service from 1911 to 1952 and work service until 1958, is now at the Seashore Trolley Museum at Kennebunkport Maine; it has been lovingly restored to

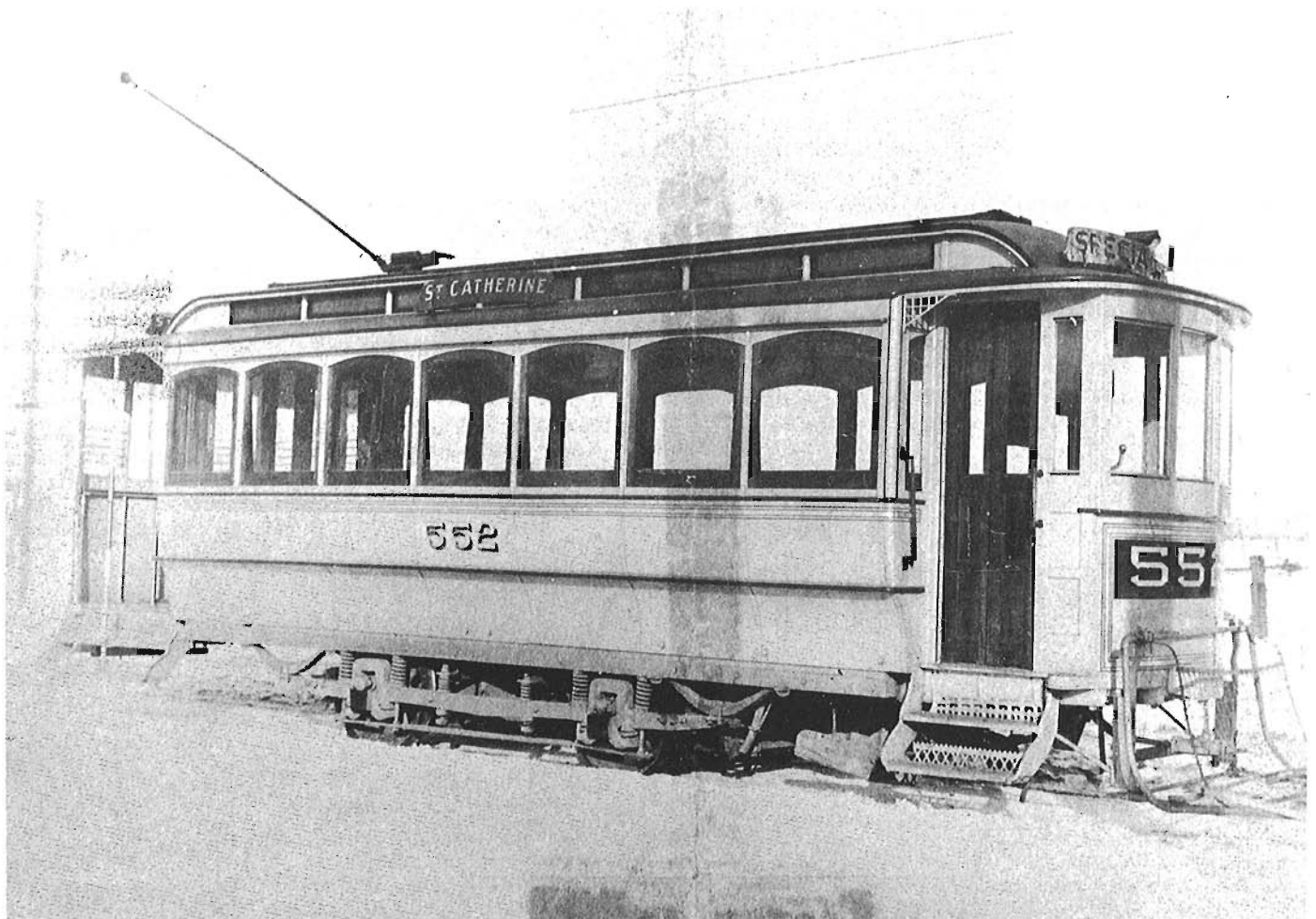


*A broadside view of car 100 (built 1900) showing how the platforms looked when built. Contrast this with the view of 512. Car 100 was never converted.*

*M.U.C.T.C. collection, C.R.H.A.*

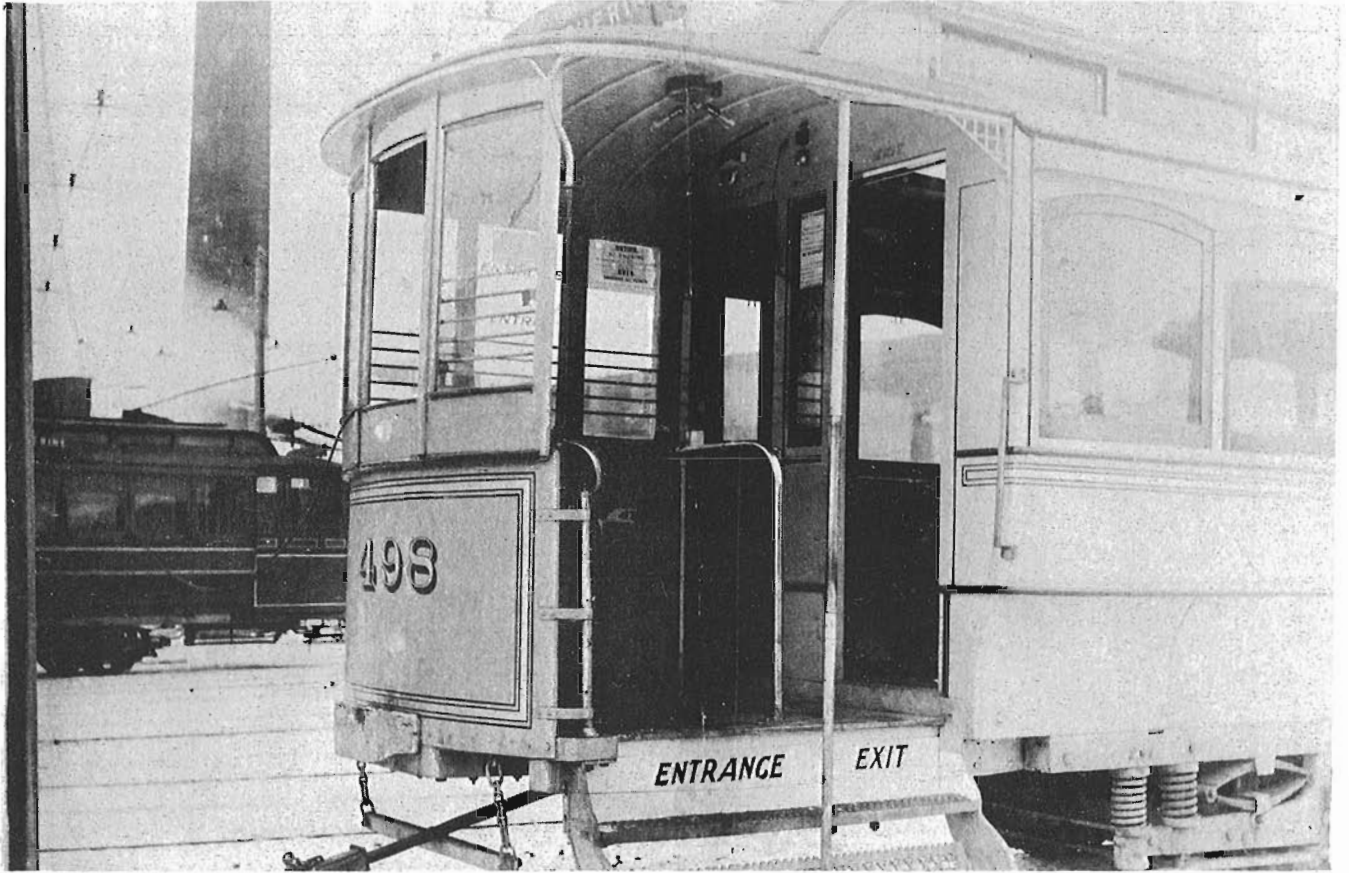
full operating condition in the authentic paint scheme of the 1940 era and is now in the best condition of the four. Oldest of the remaining early P.A.Y.E. cars, and the only survivor of the "first generation" is No. 859 which, as we have seen, was built late in 1906, went into service in 1907 and made the last run of the series in November 1952 at the age of 46. It is indicative of the high standard of maintenance of Montreal's transit system that 859 had been given a complete new exterior paint job in December 1951, less than a year before it was retired! No. 859 was, like all the others of

the type, slated to be scrapped but was saved at the "eleventh hour" after scrapping had actually begun. It is now at the Canadian Railway Museum and has undergone some restoration and preventative maintenance. It would be very fitting if it were to be restored to its original P.A.Y.E. appearance in time for its own 80th birthday less than two years away. No. 859 is the earliest surviving example anywhere of an important concept of urban transit, now almost universal, but which all began in Montreal just eighty years ago.



*A very rare group of photos, taken in 1908, of Montreal single-truck street cars as converted to P.A.Y.E. These photos were found in the archives of the City of Edmonton where they were evidently brought when Edmonton was considering designs for its own street cars which were introduced the following year. Number 552 dates from 1897, No. 498 is from 1896, while the interior view is of a similar car. The view of 498 is especially important as it shows the platform arrangement of an old car as converted, in fact this is the oldest type of car converted to P.A.Y.E. in Montreal.*

*City of Edmonton archives. Nos. EA-10-1377, EA-10-1378, EA-10-1379.*





*The interior arrangement of the 900-class cars as built is clearly shown in these two views looking "fore" and "aft" in car 942.  
M.U.C.T.C. collection, C.R.H.A.*

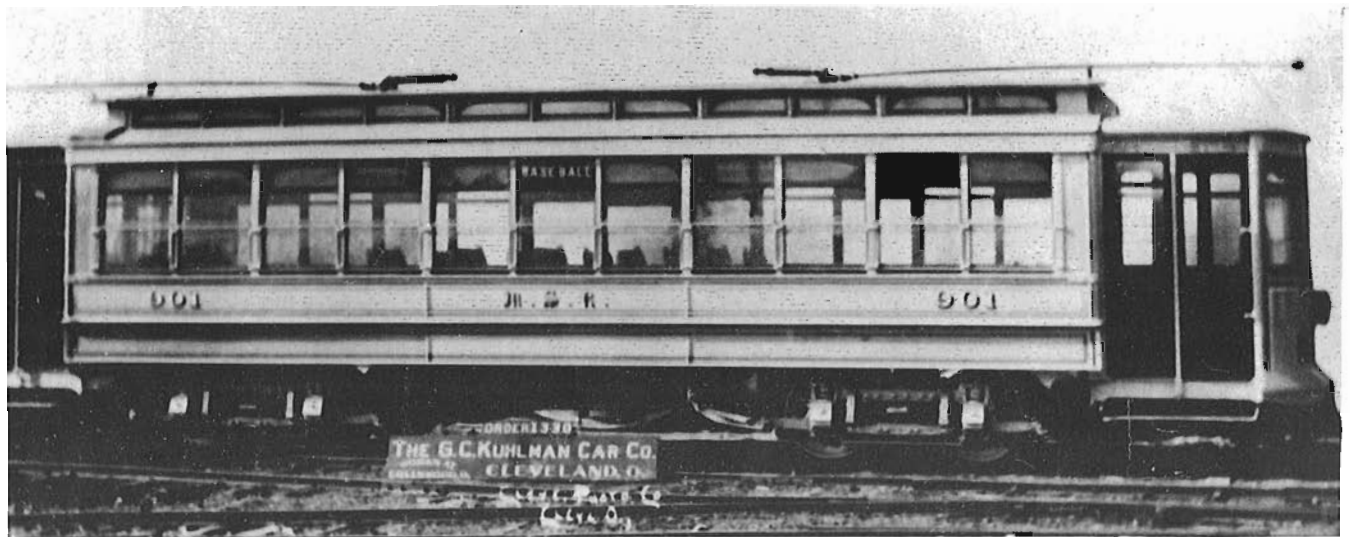




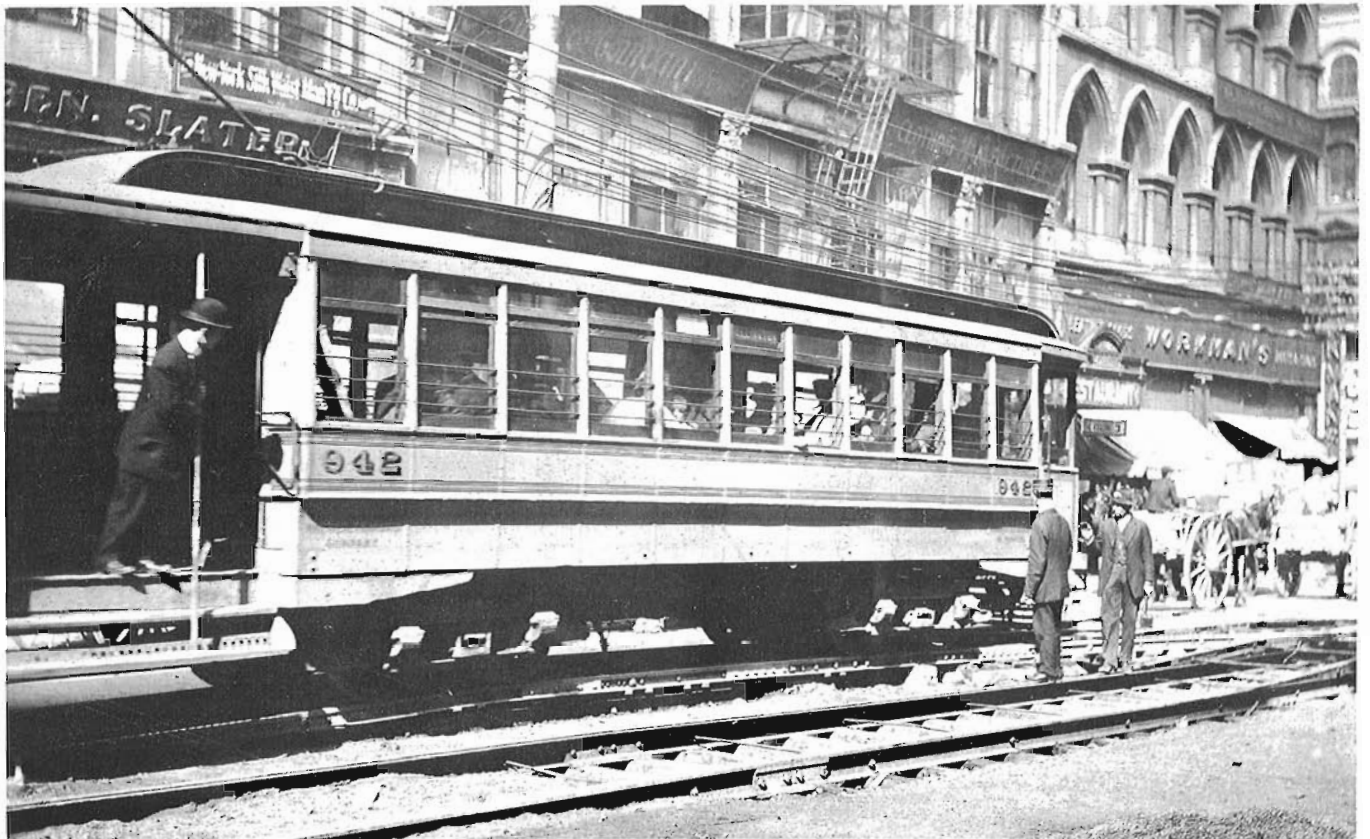
*"IF BIG IS GOOD BIGGER IS BETTER". Such was the thought when car 940 was designed in 1906. The huge 10-foot rear platform meant that the whole car was more than 53 feet long. Even a few of the smaller 900's received the extra-long platform.  
M.U.C.T.C. collection, C.R.H.A.*



Number 940 was indeed successful and 90 more were built, numbered 703 to 881 odd numbers. The long platform is clearly shown in this view of 811 at Hochelaga barn in 1913.  
M.U.C.T.C. collection, C.R.H.A.



What might have been! This remarkable photo shows one of Chicago's first P.A.Y.E. cars, the so-called "Big Brills" of 1906-08, painted in the full Montreal Street Railway P.A.Y.E. paint scheme and numbered 901. At this time Kuhlman Car Co. of Cleveland Ohio, a subsidiary of Brill, was building cars on sub-contract to Brill. These included some of the Chicago cars as well as Montreal cars 823 to 861 (odd numbers). Why one of the Chicago Brills received the Montreal paint scheme is unknown, perhaps Kuhlman and / or Brill hoped that Montreal would order some of this type. Note destination sign "Baseball" in the centre window.



The difference in size between the 900-class and 703-type is clearly demonstrated by these two photos, one of 942, the other of 725 taken at the same spot, only seconds apart, in 1912. Other than the size, the two types of cars are very similar.

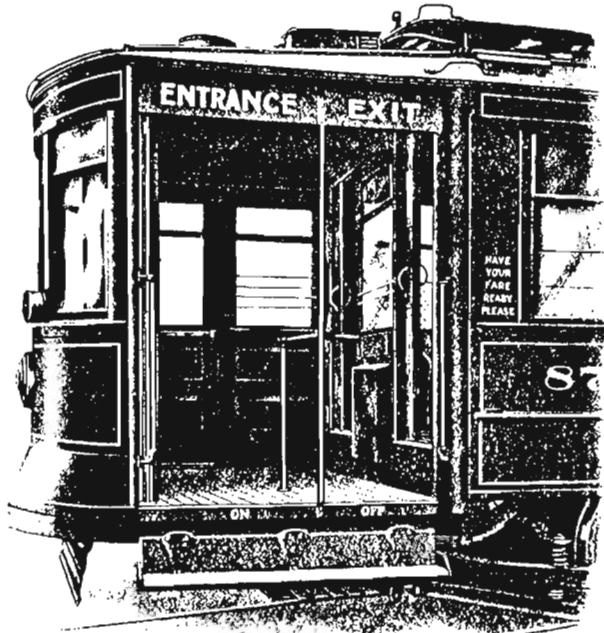
M.U.C.T.C. collection, C.R.H.A. Both photos.

# Operating Advantages of the Prepayment Idea

as demonstrated by

# Pay - As - You - Enter Cars

Accidents from the front of cars are practically eliminated, as the door is not opened until the car has come to a full stop, and the car is not started until the door is closed.



Pay-As-You-Enter Car Platform

The use of folding or sliding doors on the rear platform, and the presence of the conductor at that point, prevent accidents at the rear end.

Of almost equal importance to the obvious increase of revenue due to the adoption of the Prepayment Idea, is the inevitable improvement in schedules.

In handling hundreds of passengers the saving of a second or two on each transaction runs into hours.

An hour saved means a saving all down the line in the operating department, wages, power consumption, etc.

During peak-load hours particularly, every second saved means money to the company—and satisfaction to the public.

## A HISTORY OF THE PAY-AS-YOU-ENTER CAR AND ITS LESSON

The following cities are using Pay-As-You-Enter Cars: Chicago City Railway, 839 cars; Chicago Railways, 1,328; Public Service Corporation of New Jersey, 466; New York City Railway, 555; Third Avenue Railroad, New York, 550; International Railway, Buffalo, 200; Buffalo & Lake Erie Traction Co., 10; Washington Ry. & Elec. Co., Washington, D.C., 100; Capital Traction Co., Washington, D.C., 51; Municipal Traction Co., Cleveland, Ohio, 180; United Rys. Co. of St. Louis, Missouri, 310; Portland Ry., Lt. & Pwr. Co., Portland, Ore., 25; Columbus Ry. & Lt. Co., Columbus, Ohio, 10; Wichita R.R. & Lt. Co., Wichita, Kan., 14; Jacksonville Elec. Co., Jacksonville, Fla., 5; Dallas Elec. Co., Dallas, Texas, 20; Houston Elec. Co., Houston, Tex., 41; Northern Texas Trac. Co., Ft. Worth, Texas, 25; Ithaca Street Ry., Ithaca, N.Y., 2; Peoria Street Ry., Peoria, Ill., 13; Urbana & Champaign Ry., Champaign, Ill., 3; Mutual Lt. & Water Co., Brunswick, Ga., 4; Rochester Ry. Co., Rochester, N.Y., 25; Ft. Dodge, Des Moines & So. R.R. Co., 2; Muskogee Elec. Trac., Muskogee, Okla., 6; Union Traction Co., Dubuque, Ia., 4; Topeka Ry. Co., Topeka, Kas., 12; United Rys. & Elec. Co., Baltimore, Md., 32; Detroit United Ry., Detroit, Mich., 225; Cincinnati Traction Co., Ohio, 50; Montreal Street Railway, 400; British Columbia Elec. Ry., 30; Calgary Street Railway, 18; Metropolitan Street Ry., Kansas City, Mo., 50; Edmonton Radial Ry., 4; San Antonio Traction Co., San Antonio, Tex., 6; Rockford & Int. Ry., Rockford, Ill.; Cairo Street Ry. & Lt. System, 6; Des Moines City Railway, Iowa, 12; Macon Ry. & Lt. Co., Macon, Ga.; Virginia Ry. & Power Co.; Columbia Elec. St. Ry. & Lt. & Power Co., Columbia, S.C.; Aurora, Elgin & Chicago Ry., Chicago, Ill.; Wichita Falls Traction Co., Wichita Falls, Tex.; Ottawa Electric Ry. Co., Ottawa; Bloomington & Normal Ry. & Lt. Co., Bloomington, Ill.; Corsicana Transit Co., Corsicana, Tex.; Compania Electrica y de Ferrocarriles, Mexico; The Milwaukee Elec. Ry. & Lt. Co., Milwaukee, Wis.; Springfield Street Ry. Co., Springfield, Mass.; Lynchburg Traction Co., Lynchburg, Va.; Chicago & Southern Traction Co., Chicago, Ill.; Calumet & South Chicago Ry. Co., Chicago, Ill.

### THE LESSON

taught by this widespread use of Pay-As-You-Enter Cars is obvious. Increased Revenue, Accident Elimination and Schedule Improvement have been demonstrated in every case. Isn't all this sufficient to show that it always pays to operate the Pay-As-You-Enter Car? Why not remodel some of your present cars?

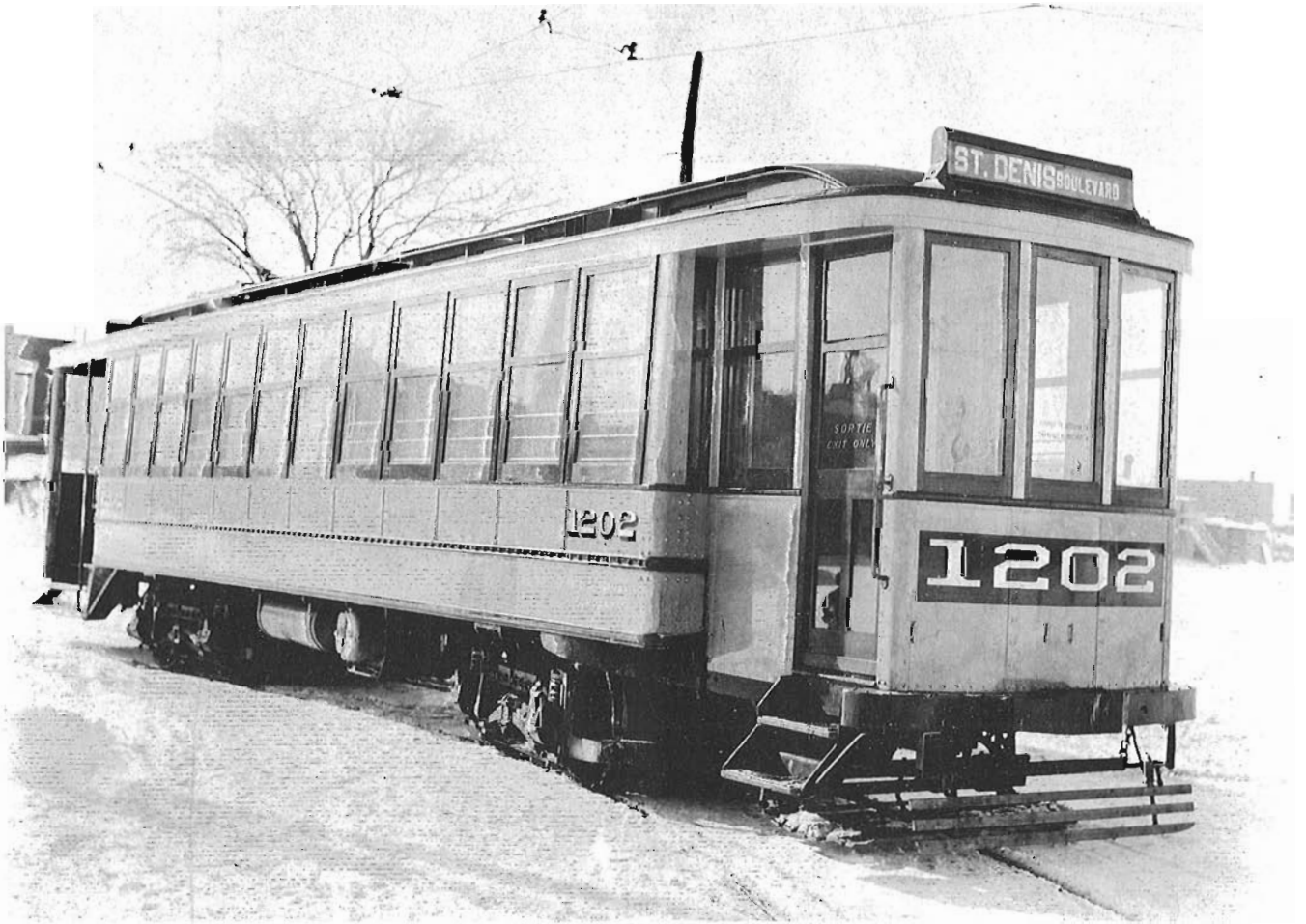
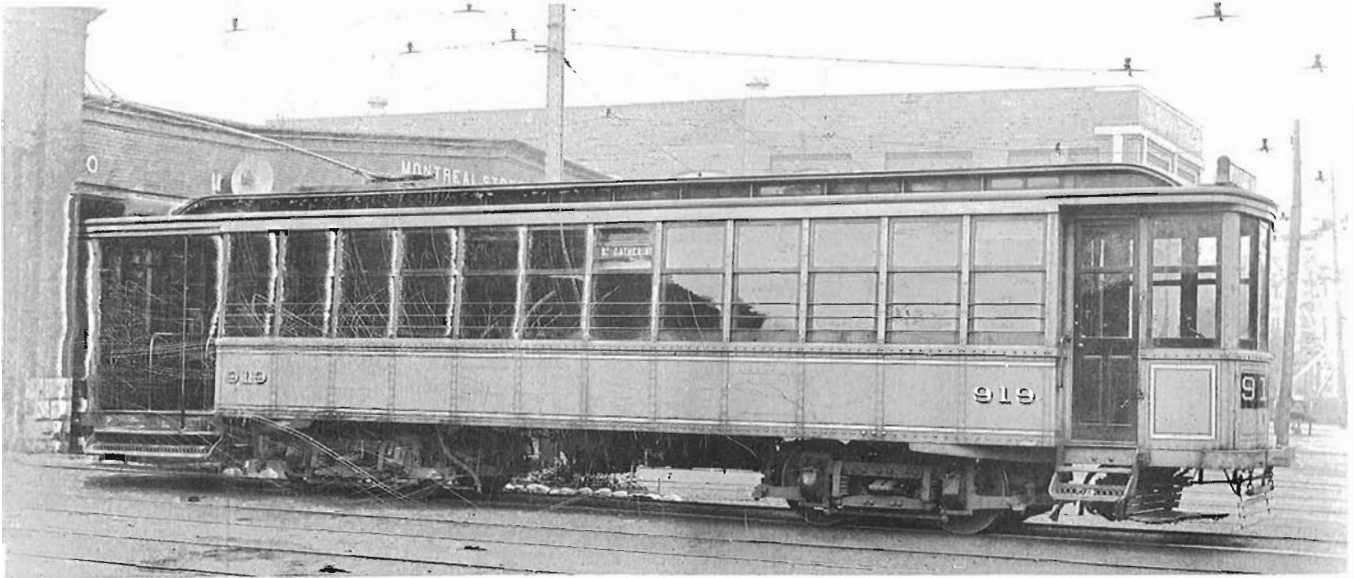
We license manufacturers and railways to build and use the Pay-As-You-Enter Car, the Patents on which are owned by

**THE PAY-AS-YOU-ENTER CAR CORPORATION,**

-

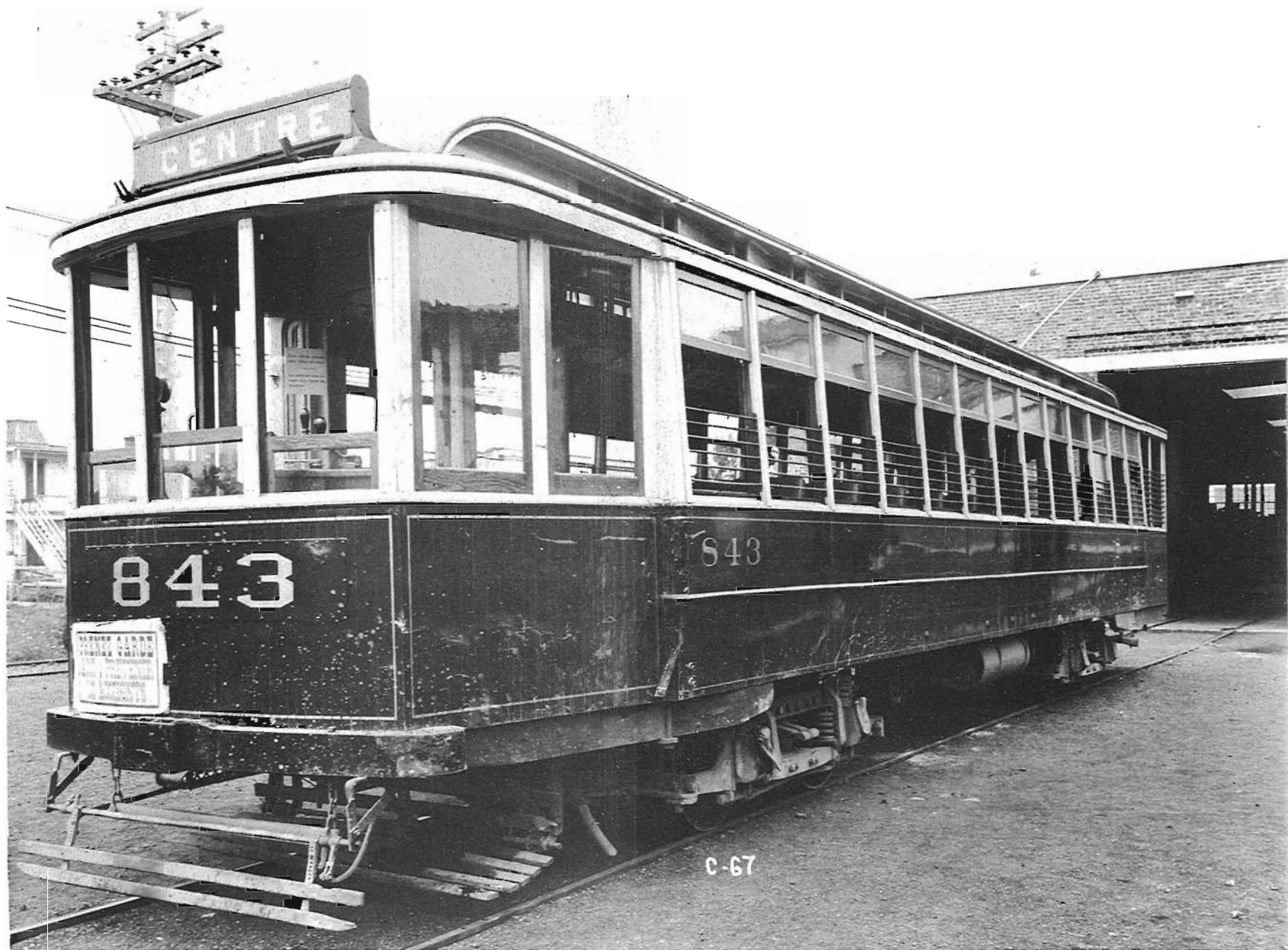
**78 CRAIG STREET WEST, MONTREAL**

*By 1910 the P.A.Y.E. concept was well established as can be seen by this advertisement listing 53 companies using the system.*



After a two-year hiatus, from 1908 to 1910, the "second generation" P.A.Y.E. cars appeared. Car 919 dates from 1910, while 1202 was delivered late in 1911. These cars show many features not found on the wooden cars of 1905 to 1908, and the differences are quite visible. The 1200's were the last to have the red number panel when new.

M.U.C.T.C. collection, C.R.H.A. Both photos.

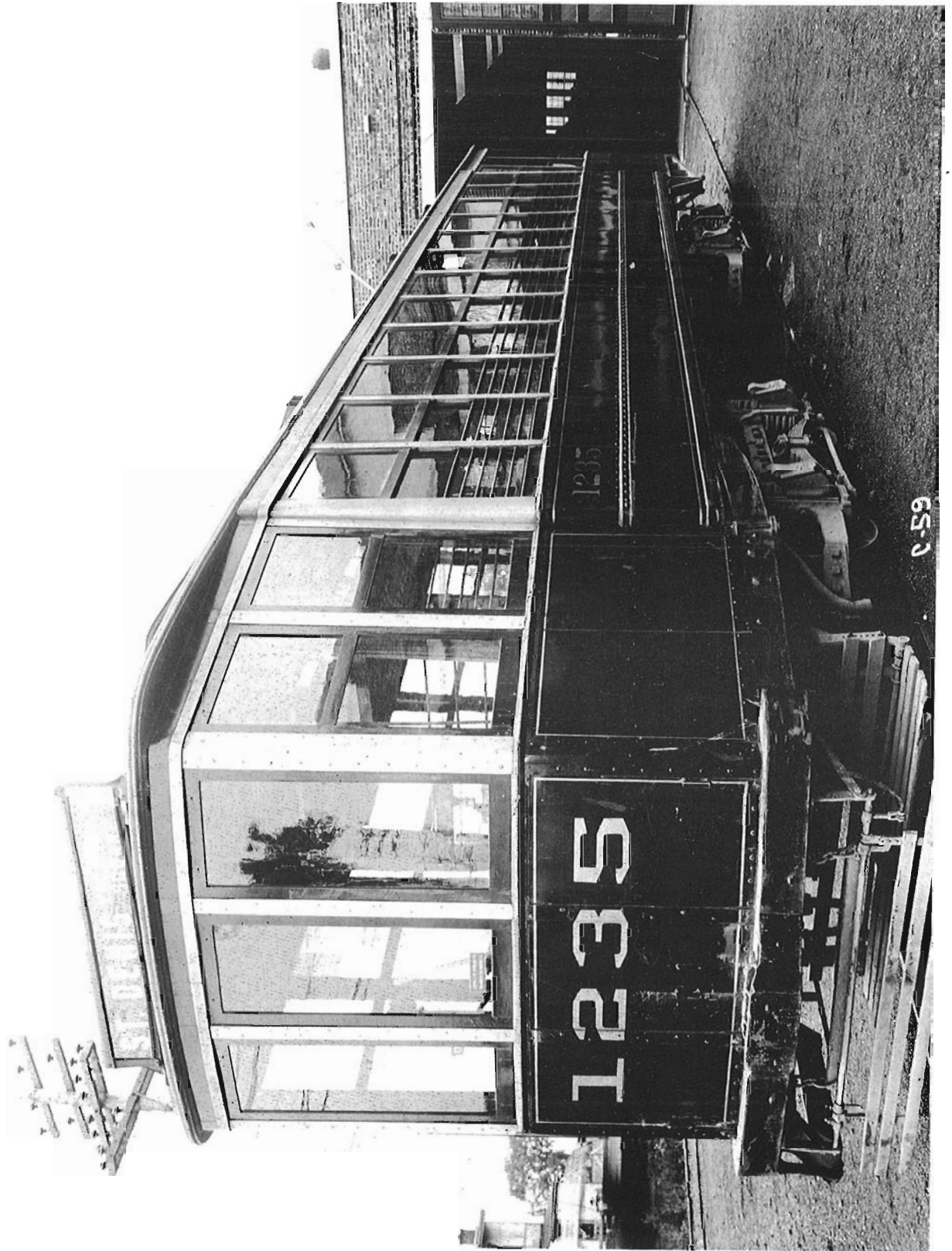


843

843

ALWAYS A BORN  
FRANCE CARDS  
FOR THE  
FRANCE CARDS  
FOR THE  
FRANCE CARDS  
FOR THE

C-67



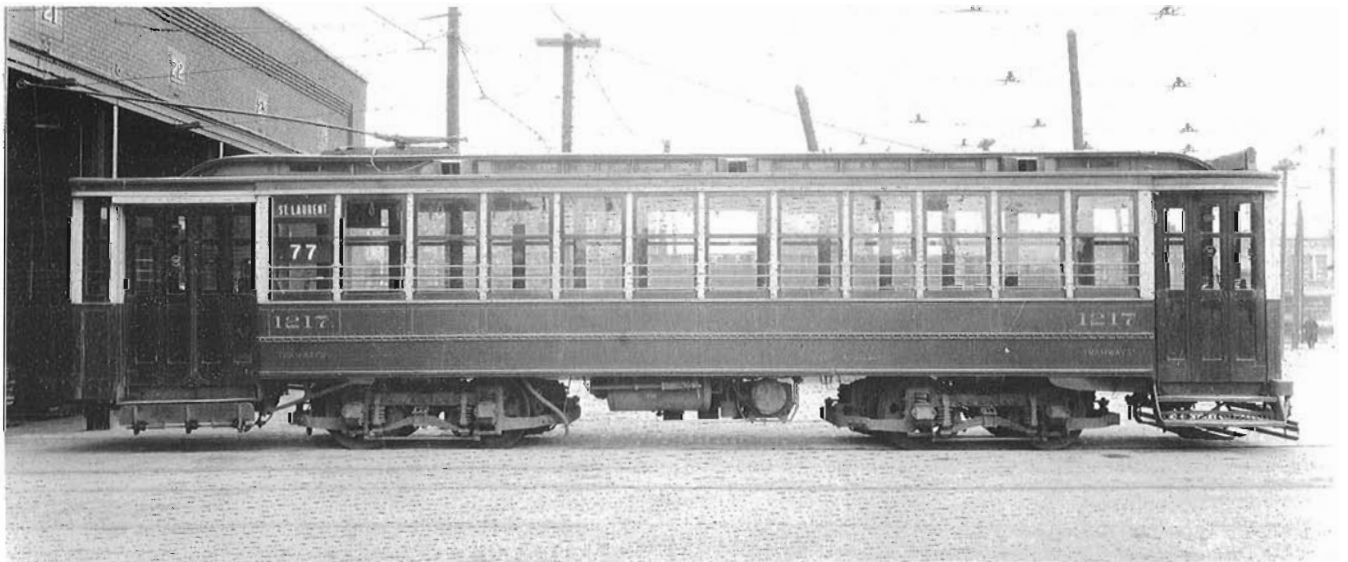
The green-and-gold paint scheme was adopted late in 1913 and within two years was applied to all cars. These similarly-oriented views of 843 and 1235 were taken about 1917 and show the great change in appearance to both first and second-generation P.A.Y.E. cars caused by the new paint scheme. The darker paint was more practical but less elegant, but after all, the cars were no longer the latest wonder, and before long newer cars would make them old-fashioned.

M.U.C.T.C. collection, C.R.H.A. Both photos.



*In 1913 a new paint scheme for the front dash was adopted, still retaining the large silver numbers but omitting the red background. This lasted less than a year and was replaced by the green paint scheme with gold lettering. Car 1230 is on St. Denis street in 1914.*

*M.U.C.T.C.*



*The 1200's were modernized by having folding doors installed in the 1920's, but most of the older ones kept the open platforms until they, or those that were left of them, were fitted with doors during World War II.*

*M.U.C.T.C. collection, C.R.H.A.*





*One of the very first P.A.Y.E. cars, number 922, survived the scrapping of the 1930's and became a "hair cleaning car" (for vacuuming the stuffing in car cushions). It is here seen languishing behind Youville Shops on June 27 1948. It was scrapped in 1950 thus making the series extinct.  
Toohey collection, C.R.H.A.*

# QUAND DEUX LIGNES DE CHEMIN DE FER S'UNISSENT

## WHEN TWO RAILWAY LINES ARE JOINED

ADRIEN D'ASTOUS

*Translation by J. P. Chartrand, T&Y Div.*

For many years CNR engineers planned to connect the EX "Intercolonial" (ICR) and the EX "Transcontinental" (NTR) somewhere between Riviere-du-Loup and St Pascal-de-Kamouraska.

Having lived my childhood in a railroad family from that area, the project was often mentioned, and during World War II, it was rumored that surveyors made a preliminary survey, but the project will wait till later for realisation.

Mention must be made of the "Canada & Gulf Terminal" (EX Matane & Gaspé Rly) Planned trackage (1909) to meet the NTR at St Eleuthere,

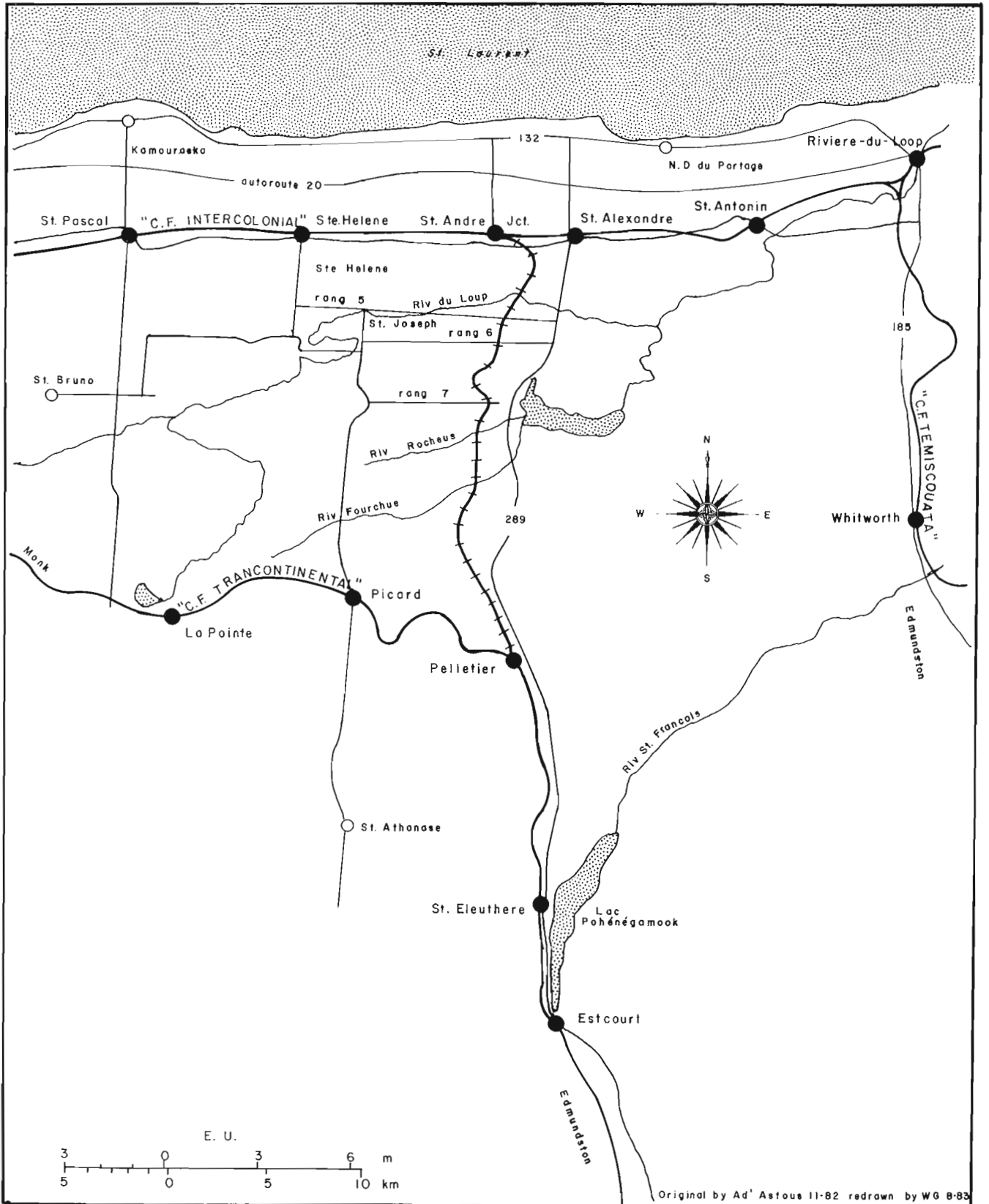
near the recent "Connection" (see Canadian Rail No. 157 July-Aug 64). The C&GT met the ICR at Ste Flavie.

In 1973, surveying was completed and a final route established. It is believed to be the first railway traced from aerial surveys. (Translator note: an aerial survey established the proposed route for a railway connecting Maniwaki and Mont-Laurier to the CNR (EX NTR) tracks in Abitibi around 1927). The connection will go from mileage 67.9 Monk sub (NTR) at Pelletier and join the ICR at mileage 15.3 Montmagny sub at St



*Pelletier Station; - Looking west. In the curb, we see the clearing after the woodcutting, in a few years, the curve will be no more*

*Pelletier station, direction ouest, dans la courbe on distingue l'éclaircie laissée par le déboisement, dans quelques années il n'y aura plus de courbe.*





*Pelletier Station; - In the curve, site of the future line.*

*Pelletier station, dans la courbe, c'est l'endroit de la future ligne.*



*Pelletier Station; - A ballast train on the old main line, waiting to be unloaded. The siding at left leads to Monk Sub.*

*Pelletier station, un convoi de pierre garé sur l'ancienne voie principale attend d'être déchargé. La subdivision de Monk, à gauche, emprente la voie dévivement.*

Andre. A distance of 19.3 miles (31.06 km).

Tenders were called on March 15th 1974 for clearing trees, and on May 20th 1975, for grading. Contracts were awarded and the work began.

Meanwhile, three bridges were required over the "Fourche", "Rocheuse" and "Du-Loup" rivers while three viaducts spanned provincial highway 230 and concession roads 5 and 6 of St Joseph Parish.

During the Summer of 1976, over 13 miles (20.9 km) of welded rails were laid, using a wide tyred layer that pulled the lengths of rails off the cars and placed them on ties, 4 km of track was thus laid in a week on over 63,000 ties. A double track was laid from mileage 73.9 to 76.4 to permit train meets in a pronounced hill.

The last rails were laid in the Summer of 1977, then the block signals were installed up to St Charles jct. The first regular freight trains rolled by October, at which time a new subdivision was created: Pelletier sub, 86.9 m. (139.8 km) from Edmuntson to St. Andre jct. Monk sub has been shortened and now extends from Pelletier to Diamond (157.1 m or 252.8 km) and block signalling has been removed. Siding was removed and infrequent work extras are not enough to keep the rails from a coat of rust. The line will not be abandoned, but kept for use in case of wreck or work on the main line.

The new line shortens the Joffre-Edmuntson mileage by 39.2 m. (63.1 km) while avoiding the Horseshoe curves at Lac de L'est (Wreck site March 7/72 see CR No. 255), St Malachie and Ste Claire, that section of Monk sub was difficult to maintain.

But the real gain was to fast freights (200-399 series) between Halifax and Montreal as the new route is shorter by 73.4 m. (118.1 km).

The new line also by-passes mileage 149 Mont-Joli sub where a washout occurred Dec 16/79, as 1200 meters of track was put out of service for months; even now, that section is worrying the B&B engineers who installed seismographs to record ground movements as the few trains roll by.

No regular passenger trains are scheduled over the new connection. Those familiar with the area are aware of the long climb from Escot to Pelletier (20 km). The track then goes along lake Pohenegamook, home of Quebec's own "Nestle", then going over the "Boucanne" River on a high threstle.

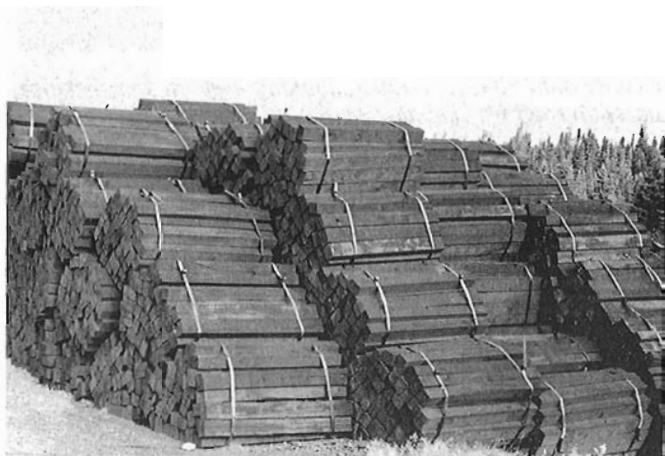
It is surprising that the ramp was not eliminated as the new line was built, as trains having reached the top start the descent to St Andre at sea level. It is not uncommon to see trains doubling that climb.

And so it is that the dream has come true, while quaint little railroad villages disappeared, cows grazing look on as No. 205 rolls along.



*Pelletier Station; - The switch is in normal position for Monk Sub. This photo at the same location that no 63-14A.*

*Pelletier station - l'aiguillage en position normale pour la subdivision de Monk. Cette photo est prise au même endroit que celle portant le no. 63-14A.*



*.Pelletier Station; - A few of the 63,000 ties to be used.*

*Pelletier station. Quelques unes des 63,000 traverses qui seront utilisées.*



*On concession road 6 viaduct looking eastward, the clearing in the distance is the right of way after a big curve, it is the week-end rest.*

*Sur le viaduc de la route du rang no 6, direction est, l'éclairere au loin est l'endroit au parre la voie après avoir décrit une grande courbe, c'est le repar de la fin de semaine.*



*On concession road 5 viaduct, looking east, in the distance, concession road 6's viaduct.*

*Sur le viaduc de la route du rang no. 5, direction est. Au loin de viaduc du rang no. 6.*



*On concession road 5, viaduct looking west, we see the Riviere-du-Loup Bridge.*

*Sur le viaduc de la route de rang no. 5, direction ouest, on distingue le pont de la rivière du Loup.*



*The Riviere-du-Loup Bridge, in the distance, concession roads 5 & 6.*

*Le pont de la rivière du Loup, au loin les viaducs du routes du rangs no. 5 no. 6.*

Depuis bien des années les ingénieurs du Canadien National projetaient de relier les deux lignes de chemin de fer que constituaient l' "Intercolonial" et le "Transcontinental" quelque part entre Rivière-du-Loup et St-Pascal de Kamouraska.

Ayant vécu mon enfance dans cette région, et de plus issu d'une famille de cheminots, je me souviens d'avoir entendu souvent parler de ce projet. A une certaine époque lors de la deuxième guerre mondiale il fut même question qu'une équipe d'arpenteurs avait tracé les premières esquises, mais ce fut beaucoup plus tard que ce projet fut mis à exécution.

On ne peut parler de ces événements sans faire allusion au tracé élaboré par le "Canada & Gulf Terminal" né de la réorganisation du "Matane and Gaspé Railway" en 1909, pour rejoindre le "Transcontinental" près de St-Eleuthère, à peu de distance de l'endroit où aujourd'hui on vient de réaliser la

jonction des deux lignes ferroviaires (voir Canadian Rail no. 157, juillet-août 1964). D'autre part la liaison avec l' "Intercolonial" se faisait à Ste-flavie.

En 1973 les travaux d'arpentage furent complétés et le tracé définitif fut choisi. Ce fut probablement une des premières fois que l'on réalisait un tracé de chemin de fer à partir de relevés aériens. La bretelle aurait son point de départ à la borne milliaire 67,9 de la subdivision de Monk à Pelletier station et rejoindrait l' "Intercolonial" à la borne milliaire 15,3 de la subdivision Montmagny à St-André. La longueur de la nouvelle voie sera de 31,06 km (19,3 m.).

Le 15 mars 1974 des appels d'offres furent demandés pour le déboisement de l'emprise de la borne 0,00 jusqu'à la borne 6,7. Un peu plus tard, soit le 12 mai, on demandait des soumissions pour le déboisement de la section comprise entre les points 6,7 et 18,6. A ce moment le projet était



*On concession road 6, train 305 rolls down towards St-Andre jct. Units are 9413-9623-9582-5505 and 9525. The last will be set off at St Andre to be used by train 340 as helper towards Pelletier.*

*Sur le viaduc de la route du rang no. 6. Le convoi no. 305 descend allégrement vers St André Jct. Les locomotives sont 9413, 9623, 9582, 5505 et 9525. La dernière sera laissée à St. André pour être prise par no. 340 dans quelques minutes afin de lui permettre de monter la rampe vers Pelletier.*



*Pelletier Station; - Looking west, photo taken at the same location than 63-14 and 67-17. Train 340 is expected. The switch at left leads to Monk Sub*

*Pelletier station, direction ouest, photo prise au même endroit que celles portant les numéros 63-14 et 67-17, le no. 340 se fait attendre, l'aiguillage a gauche c'est le debut de la sub-division de Monk. La jonction se fait par la voie d'évitement.*



*Pelletier Station; - Train 340 sand blowing, has climbed this hill at 20 km/H, thanks to unit 9525. The other units are 2018-2026 and 3625, the last having died between St Jean-Port-Joli and La-Pocatiere*

*Pelletier station, le convoi no. 340 avec toutes les sablières ouvertes, parvient à se sortir de cette rampe à quelques 20 km/heure. Merci à la 9525, les autres locomotives sont la 2018 la 2026 et la 3625 qui s'est tû-quelque part entre St. Jean-Port Joli et la Pocatière.*



connu comme étant "La liaison Monk-Montmagny, près de Rivière-du-Loup".

C'est durant la période été automne 74 et hiver 74-75 que le déboisement de l'emprise fut réalisé.

Le 20 mai 1975 on procédait à l'appel d'offres pour le terrassement et le drainage pour la section comprise entre les points 9, 1 et 18,6. Le 31 juillet on poursuivait avec la section 0,00 à 9,1.

Au moment où se poursuivaient ces travaux on préparait les plans et devis pour la construction de trois ponts et trois viaducs. Les ponts devant enjamber les rivières Fourchue, Rocheuse et du Loup. Tant qu'aux viaducs ils permettaient le passage des routes secondaires des rangs no. 5 et 6 de la paroisse St-Joseph et de la route provinciale no. 230.

Les travaux de ramblai allaient si bien que durant l'été 76 plus de 20,9 km (13 milles) de rails furent posés; il s'agissait de rail de 1,170 m. de long et une nouvelle méthode de pose fut adoptée. Un véhicule spécial, monté sur pneus dont l'écartement permettait de manoeuvrer à l'extérieur des traverses, tirait deux rails à la fois d'un convoi conçu à cet effet. Ces rails étaient facilement tirés car ils glissaient sur des rouleaux placés à interval régulier sur les traverses. Cette méthode rapide a permis de poser jusqu'à 4 km (2,5 milles) de rails par semaine. Plus de 63 000 traverses furent utilisées. Une double voie fut construite sur une longueur de 4 km entre les bornes 73,9 et 76,4 de la nouvelle subdivision afin de faciliter les manoeuvres de croisement dû à la présence d'une rampe assez raide. Cette voie est identifiée sous les vocable de "Fourchue".

C'est durant l'été de 1977 que les derniers rails furent mis en place et on procéda à l'installation du système de signalisation automatique ainsi que sur la subdivision de Montmagny jusqu'à la jonction St-Charles. C'est en octobre que les premiers convois réguliers ont commencé à circuler, et par la même occasion une nouvelle subdivision a vu le jour, soit celle de Pelletier qui s'étend d'Edmundston à St-André jct, une longueur de 139, 8 km (86,9 millrd). La section comprise entre Edmundston et Pelletier est sous la gouverne du régulateur d'Edmundston alors que celle de Pelletier - St-André relève de régulateur de Montréal. La subdivision de Monk fut emputée d'autant et s'étend maintenant de Pelletier à Diamond (Joffre) pour une distance de 252,8 km (157,1 milles) et la signalisation automatique qui fut installée au début des années 60 à été enlevée. La plupart des voies d'évitement ont été démantelées et seul quelques rares convois "facultatifs de travaux" essayent, sans y parvenir, d'empêcher les rails de rouiller. Cette voie ne sera probablement pas dés-

affectée, elle sera très utilisée lors de déraillements ou de travaux majeurs sur l'autre subdivision.

Avec la construction de cette bretelle, le trajet Edmundston-Joffre est raccourci de 63,1 km (39,2 milles) et permet d'éviter les courbes en fer à cheval du lac de l'est (site d'un grave déraillement le 7 mars 72, voir Canadian Rail no. 255) de St-Malachie et de Ste-Claire, cette section de la subdivision de Monk était particulièrement difficile d'entretien.

L'un des principaux avantages est probablement le fait que les grands convois de marchandises de la série des express 200 et 300 qui relient Montréal à Halifax en passant par Campbellton et Mont-Joli empruntent maintenant la nouvelle bretelle et passent par Edmundston. Le trajet est donc raccourci de 118,1 km (73,4 milles) soit près de 240 km (150 milles) pour un aller-retour. Au prix du tonnage-kilomètre aujourd'hui il est facile de conclure que cet investissement sera vite rentabilisé.

Cette voie permet aussi d'éviter la section qui s'est affaissée lors d'un glissement de terrain le 16 décembre 1976 à la borne milliaire 149 de la subdivision Mont-Joli entre St-Simon et St-Fabien. On se rappellera que plus de 1 200 mètres de voie furent mis hors d'usage pour de long mois. Même à l'heure actuelle cette section cause des inquiétudes aux ingénieurs qui ont installé des sismographes pour enregistrer les mouvements du sous-sol lors du passage des convois qui se font plus rares depuis l'ouverture de la liaison.

Aucun convoi de passagers n'a encore roulé sur cette nouvelle voie, qui a tout de même cachet assez pittoresque. Ceux qui sont familier avec la région savent qu'il y a une rampe assez prononcée entre Escout et Pelletier soit une distance de 20 km. La voie longe le lac Pohénégamook rendu célèbre par son supposé montre, pour ensuite enjamber la vallée de la rivière Boucanée sur un très haut viaduc.

Aussi curieux que cela puisse paraître la nouvelle voie n'a pas éliminé cette rampe. Aussitôt les convois l'ont-ils gravie qu'il faut la descendre pour atteindre le niveau de la mer à St-André. Même avec l'avènement de puissantes locomotives il n'est pas rare de voir des convois doubler cette rampe, manoeuvre qui prend quelques heures.

Et voilà un projet si longtemps rêvé, enfin réalisé. Alors que de pittoresques petits villages ferroviaires ont disparus de la carte, les vaches du paisible cultivateur du rang no. 5 de St-Joseph ruminent leur pâturage en regardant passer le 205.

# C.R.H.A. communications



## NEWS FROM THE DIVISIONS

**ROCKY MOUNTAIN/APRA:** The Museum will be opening its "doors" for the 1985 season on Saturday May 18, 1985. For more information write to them at Box 6102, Station C, Edmonton Alta. T5B 4K5 or call 403-973-9075 (weekends) if you are planning a trip to Edmonton during the summer.

Speaking of the museum they have recently obtained as their "last major 'portable' piece of railway architecture" a 71' 2" turntable donated by CP Rail. The turntable was located at Crowsnest.

**CALGARY & SOUTH-WESTERN:** Lethbridge is celebrating its centennial this year and their famous viaduct is 75 years old. To honour the occasion, the Division held a trip to the city on April 27. Hopefully we can provide a write up of this interesting trip in the future.

**WINDSOR & ESSEX:** The following members were elected to the 1985 executive:

President .....	Ken Annett
Vice President .....	Syd Smitherman
Sec./Treasurer .....	Todd Shaw
Archivist .....	Laurence Johnston
Editor .....	David Parker
Directors .....	Ken Garber Ted Hanifan Neil Smitherman

**TORONTO & YORK:** The Division held its annual Model Railway Show in March. This the tenth show was a great success and attendance was improved partly because of the good weather. From a list in the February issue of "Turnout" of things to do it is obvious that a lot of people did a lot of work to make it such a success. (Thanks to Hollie Lowry for this info.)

The Division will be running another annual event on June 8 — the trip to the Arcade & Attica Railroad. In early May they also arranged a tour to CN's MacMillan Yard.

**CANADIAN RAILWAY MUSEUM:** The staff was busy preparing for the 1985 season, which commenced on April 28, 1985. On Saturdays the volunteers have been rebuilding the ground floor of our office to provide a private office for our Director, a reading room for researchers and to relocate the kitchen. Dave Johnson, Charlie DeJean Bill Hrynkow and Odilon and Pierre Perrault have contributed to this effort. Ed Lambert has spent some cold Saturdays working on Montreal Tramways No. 1959 while Gord Hill kept our snowbanks under control. Odilon Perrault has been working on rehabilitating Montreal Tramways No. 3200 replacing the effects of dry rot and rebuilding all of the windows — all in preparation for an "in car" exhibit area for Montreal Tramways memorabilia for the new season.

Visitors will enter one end by stairs, view the exhibit and exit at the other end.

## CORRECTION

The date of the engravings on the front cover and inside the front cover of our November - December issue was wrong by two years. Instead of the winter of 1867 - 68, the scenes are actually of the great storm in the winter of 1869 - 70 near Victoriaville Que. The paper on which they are printed is watermarked "1870" the date of its manufacture.



*MOST OF THE PARTICIPANTS in the Canadian Rail meeting at Dorval on March 9 1985 (see March-April "Communications"). From left to right we see: Jim Patterson (Membership Services), Steve Walbridge (C.R.H.A. Treasurer), Dave Johnson (C.R.H.A. President), Bruce Ballantyne (C.R.H.A. Communications), Earle Roberts (Editor, Bytown Railway Society "Branchline"), Peter Murphy (Production Manager and Co-Editor, Canadian Rail), Fred Angus (Editor, Canadian Rail).*

*Photo by Fred Angus.*

## **BACK COVER:**

*Passengers boarding large Pay-As-You-Enter car 729 in 1907. This car was scrapped in 1933 but some ran until the 1950's.*

*M.U.C.T.C. collection, C.R.H.A.*

# Canadian Rail

P.O. Box 282 St. Eustache, Qué., Canada  
J7R 4K6

 Canada Post  
Postes Canada  
Postage paid Port payé

**Book Tarif  
rate des livres**

PERMIT # 78  
St-Eustache, Qué.

Postmaster: if undelivered within  
10 days return to sender, postage guaranteed.

