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FRONT COVER: En route from Montreal to Quebec City on March 15 1959, the morning CPR train stopped for 15 minutes while the engine, unstreamlined Hudson No. 2816, took water. At the same time the engineer went to work with the oil can, lubricating the various bearings. This was the last day of service of the electric interurban in Quebec, and a group of enthusiasts were on the way, by regular train, to ride the interurban's last trip. 2816 was one of the last CPR steam locomotives in service, and it has recently been re-acquired by CP after many years at Steamtown in the United States. Photo by Fred Angus

BELOW: While 2816 and her sisters were unstreamlined, those built from 1937 on had streamlining like that on other CPR passenger locomotives built at that time. Most famous of all was 2850 which hauled the Royal train of 1939 and gave the name "Royal Hudson" to the entire class. Here we see it at the Canadian Railway Museum on March 13, 1965. Photo by Fred Angus

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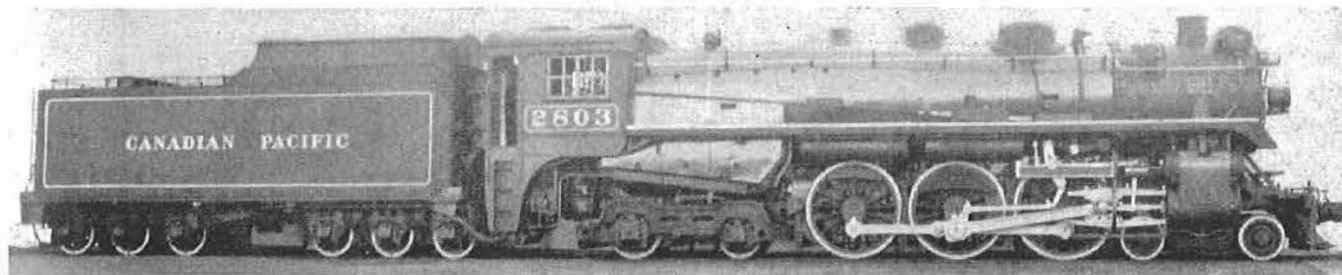
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The CPR's First Hudsons, 1929 - 1930

As most CRHA members know, the Canadian Pacific Railway has re-acquired H1b Hudson type steam locomotive 2816 from Steamtown U.S.A. in Scranton Pa. 2816 is being restored to operating condition, the boiler has returned to Vancouver from overhaul in Portland, and the locomotive may be operational this spring. It is therefore appropriate to reprint portions of articles that appeared in the Canadian Railway and Marine World in 1930 and 1931 soon after these locomotives were built.

The first Hudsons built for the CPR were the H1a series, numbers 2800 to 2809 built by Montreal Locomotive Works in 1929. These were followed in 1930 by the H1b series, numbered 2810 to 2819, also built by MLW. There is very little difference between the two types, so most of the description below will apply equally well to both series.



The ordering by Canadian Pacific Railway from the Montreal Locomotive Works of ten 4-6-4 type locomotives represents the introduction of a new type to Canadian practice, no locomotives with 4-wheel leading truck, 3 pairs of drivers, and 4-wheel trailing truck having been in Canadian service before. In fact, this wheel arrangement was unknown on this continent, so far as the writer is aware, until comparatively recent years, when the New York Central introduced it, designating the locomotives with this wheel arrangement as the Hudson type. One or two other United States railways now have a few 4-6-4 locomotives in service.

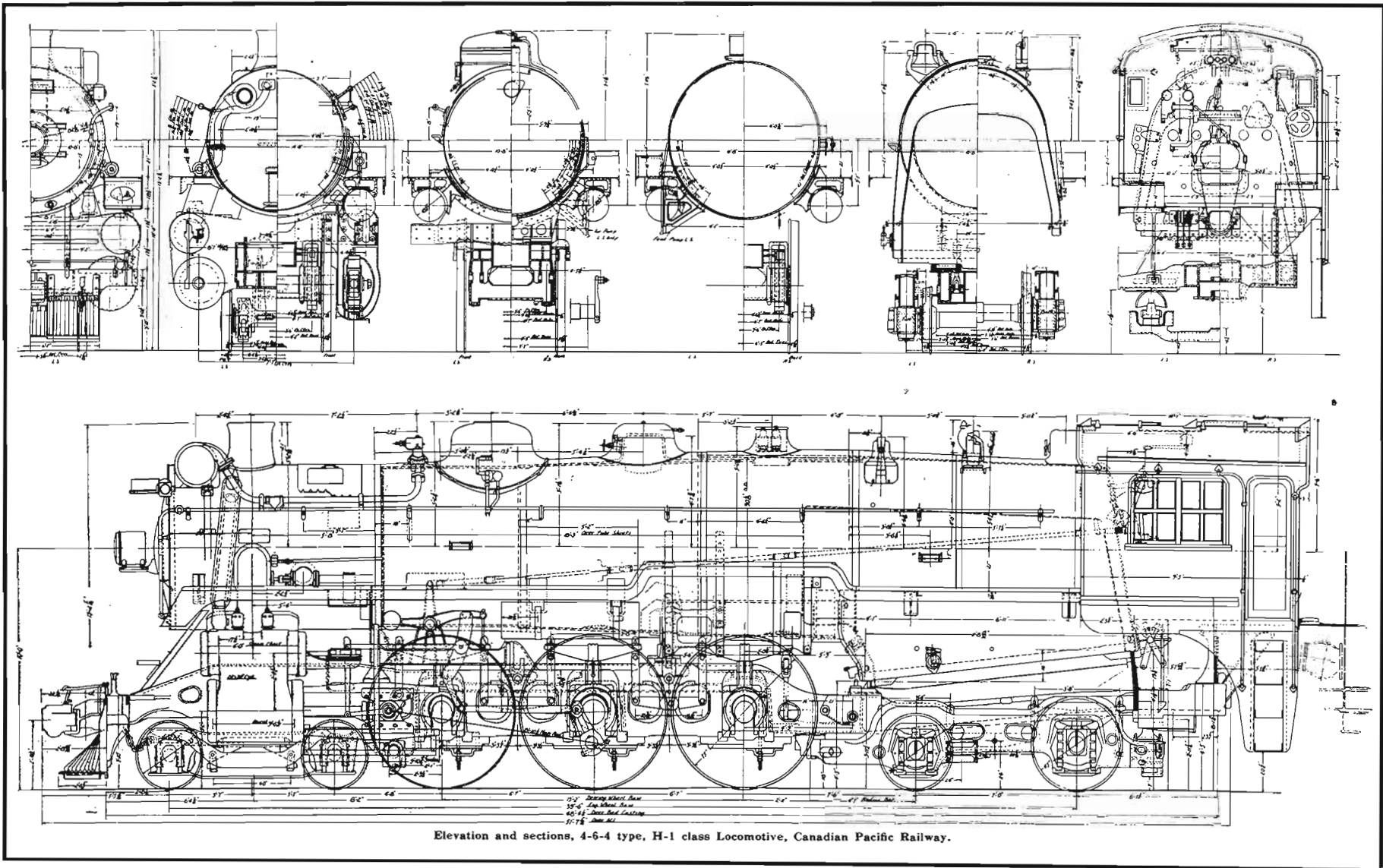
The thought inspiring the design and construction of these 4-6-4 locomotives cannot be better expressed, perhaps, than in the words used in Canadian Railway and Marine World for Aug. 1929 in connection with them, as follows: - "In adopting this type of locomotive, the C.P.R. has in view the securing of greater schedule speeds and greater tractive effort at high speeds without any increase in axle loads. The present modern Pacific type power on the C.P.R. has axle loads approaching the allowable limits. Substitution of the 4-wheel trailing truck for the 2-wheel one will, while permitting the retention of the Pacific type standards in wheels, axles, running gear, etc., at the same time permit of the design and application of an entirely new boiler, and one of much greater steam generating capacity. The provision of this large boiler, with enlargement of the grate area, and, incidentally, a change to the type E superheater, will make possible a 14% increase in steam production. Thus a boiler will be secured which may be relied upon to furnish a generous supply of steam at high speeds; the net result of the change will be a 25% increase in tractive effort at speeds over 25 m.p.h. In addition, this increased power output will be secured with economy, as it is calculated that the coal consumption will be only little, if any, greater than with the Pacific type locomotives."

The superiority of the 4-6-4 locomotive as regards sustained capacity at high speeds is well exemplified by a study of the speed - drawbar horsepower curve and a

comparison with similar curves for locomotives produced a few years ago. In earlier types the maximum drawbar horsepower was produced at a speed of approximately 40 m.p.h., and the flat or top of the curve, where the locomotive will produce its maximum performance, is in the range of from 32 to 50 m.p.h. On the 4-6-4 type locomotive, in which the sustained capacity is the main feature, the maximum power is developed at 48 m.p.h., and the equivalent range of most economic performance is from 32 to 80 m.p.h.

While the 3100 class locomotives referred to above are heavy duty passenger locomotives, and the 5900 class are special service freight locomotives, the 4-6-4 locomotives, designated as the H-1 class and numbered in the 2800 series, are looked upon as general service passenger locomotives. As in the 5900 class oil burning locomotives, the usual frame arrangement has been replaced by a Commonwealth one-piece cast steel locomotive bed, with valve chests and cylinders cast integral. Generally, mechanical features are identical with the two preceding classes of locomotives in this series. The 4-wheel trailing truck, a General Steel Castings Corporation, Commonwealth Division, product, with outside bearings, is of the same type as applied on both previous classes of locomotives, and adds greatly to riding qualities. On these 4-6-4 locomotives the wheels of the trailing truck are braked, a brake cylinder being mounted at each side of the truck. The leading truck is a Commonwealth 4-wheel constant resistance type. The driving boxes for the leading and trailing drivers are of the usual type, with Franklin spreader castings. Grisco boxes, also equipped with Franklin spreader castings, are applied at the main drivers. Five of the locomotives are equipped with Franklin driving box lubricators throughout; the others are equipped with Alco driving box lubricators.

The main and side rod arrangement is of the usual type. Floating bushing bearings are used on the main crank pins. The main driving journals are 12 x 14 in., with leading and trailing driving journals 10 1/2 x 14 in. The leading truck journals are 6 1/2 x 13 in., and the trailing truck journals





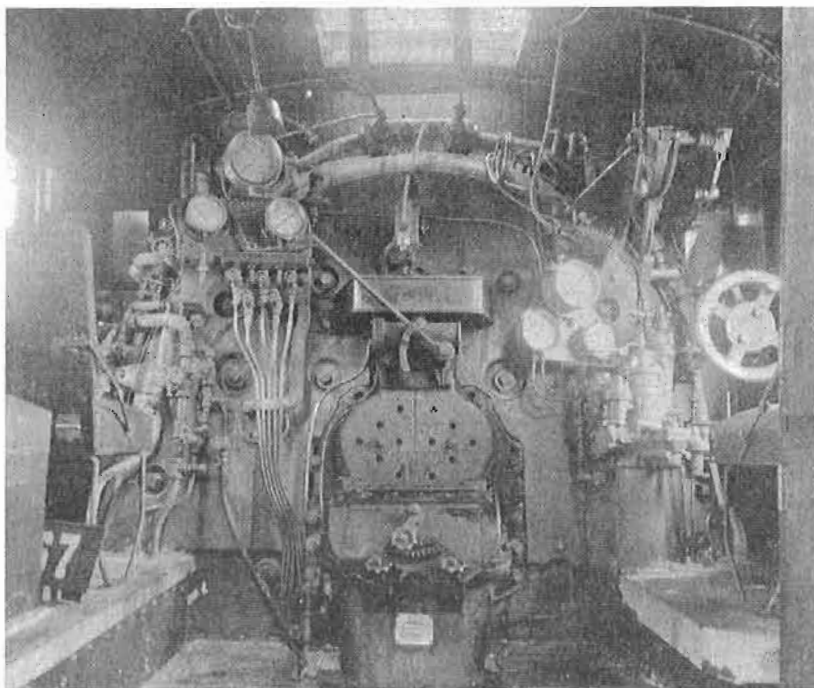
Built for the Canadian Pacific

Total weight of engine, 351,200 pounds.
 Weight on driving wheels, 183,800 pounds.
 Diameter of driving wheels, 75 inches.
 Boiler pressure, 275 pounds.
 Cylinders, 22 x 30 inches.
 Maximum Tractive Power, 45,300 pounds.

MONTREAL LOCOMOTIVE WORKS, Limited
 MONTREAL CANADA

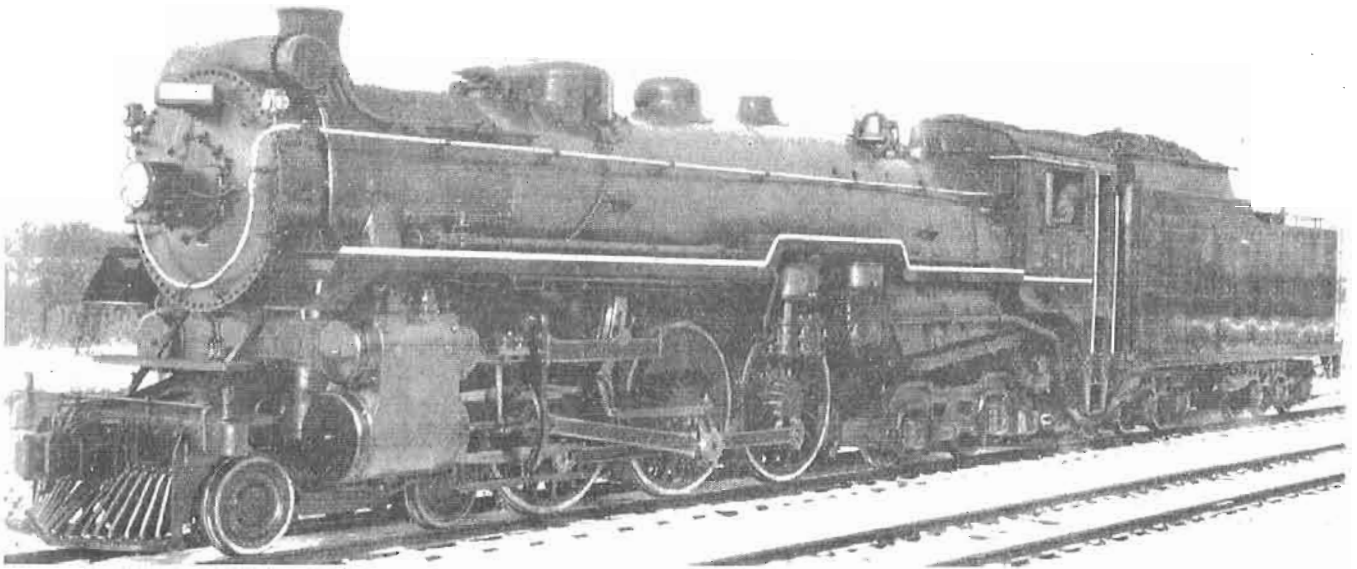
7 x 14 and 8 x 14 in. Boosters have not been applied, but provision has been made in the design for easy future application if desired. The main and side rods are of low carbon nickel steel, and the bearing metal for rods and driving boxes is nickel bronze. Crossheads and spring saddles are

of nickel cast steel. The boiler, including the staybolts, is of nickel steel throughout with the exception of the wrapper sheet, which is of the class of steel usually used in boiler construction. The main crank pins are of nickel steel. Crossheads are of the usual alligator or 2-guide type.



The boiler is of the radial stayed type. The firebox, 131 1/16 x 88 7/8 in. is fitted with brick arch carried on 4 arch tubes, and Rosebud grates, with grate air opening restricted to 18% of total area. The grates are hand shaken. The boiler feed equipment includes Elesco feedwater heater and pump, with a Hancock non-lifting injector on the right side. The arch tubes are of nickel steel. The firedoor is of the Franklin air-operated butterfly type. The firebox is fitted with combustion chamber.

The locomotive is fired by a BK stoker, with the stoker engine mounted conveniently on the tender. The throttle, as on the 3100 and 5900 class locomotives, and also on the G-3-d pacific type, is of the smoke box type, combined with the superheater header, giving the advantage of quicker locomotive response following throttle opening, ability to carry out throttle repairs without blowing down boiler by merely closing shut-off valve in dome and possibility of using superheated steam for auxiliaries. Superheated steam is supplied for



CPR 2814 was an H1b and was built in 1930. It was identical to 2816 which has been preserved.

the stack blower, electric headlight dynamo, whistle, stoker engine, air compressor and feedwater heater pump, and saturated steam is supplied to the steam heat line and inspirator. Steam heat equipment includes Leslie type AK reducing valve, Gold steam heat connections, and Barco flexible connections at rear of tender. The boiler is fitted with three World Consolidated safety valves, 2 muffled and 1 plain. Barco blow-off cocks are fitted in throat sheet, and Murphy blow-off cocks in the side sheets. Top boiler feed is employed, as in previous C.P.R. locomotives.

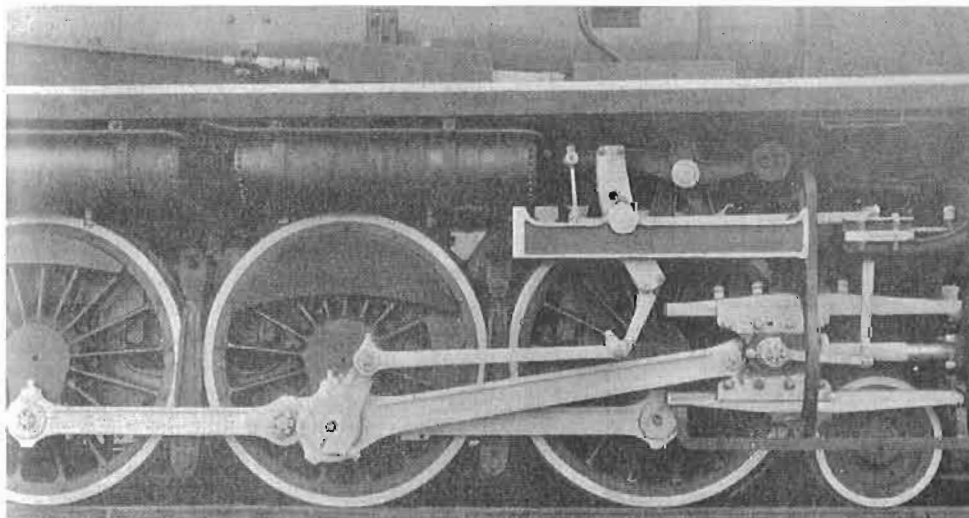
The reverse gear is of the C.P.R. standard screw type, used so successfully on previous locomotives for many years, but includes the re-arrangement introduced with the 3100 class locomotives, whereby only the wheel and indicator are inside the cab, the screw being outside and well forward of it, at running board level, and protected by a metal case enclosing it. The standard vestibule type cab has been laid out with the same attention to convenience for the crew as were those of the 3100 and 5900 class locomotives, with valves and gauges panel mounted, air brake pipes and fittings gathered together into a manifold, and ample cupboard space.

Air brakes are of the Westinghouse E.T.-6 type. Compression is by one Westinghouse 8 1/2 in. cross-compound compressor. Both the air compressor and feedwater heater pump are mounted on the left side. The running board outside angles, and the handrails are aluminum, enhancing the locomotive's appearance.

Mechanical or force-feed lubricators are mounted on all 10 locomotives, driven by a connection from the Walschaert valve gear combination lever. Nathan lubricators are fitted on 5 locomotives, and Detroit on the other 5. They lubricate the valves, cylinders, air compressor, feed water heater pump, and stoker engine. The Walschaert valve gear was also applied on the 3100 and 5900 class locomotives. A close-up view of it as applied to these 2800 class 4-6-4 locomotives is given in the illustration below, showing details of reversing arm, link and block, eccentric rod, radius rod, lap and lead lever, etc. The installation is suggestive of the maintenance of square engines from one valve setting until the next, and low maintenance costs.

The tenders are of the same pattern as those of the 5900 class locomotive having a Commonwealth one-piece cast steel water bottom, and rectangular tank. Capacity is 21 tons coal and 12,000 imp. gall. water. The tender is carried on Commonwealth 6-wheel trucks fitted with clasp brakes, wheels being steel tired, 36 1/4 in. diam., and journals 6 x 11 in. Weight of tender in working order is 292,000 lbs.

The total weight of the engine and tender in working order is 642,900 lbs., and weight on drivers is 183,800 lbs. The total tractive effort is 45,300 lbs.



The Saga of the Cote des Neiges Street Car Line

by Fred Angus

This article has required more research, and contains more personal recollections, than any other that your editor has ever written. It was intended to appear in 1999 on what was then thought to be the centennial of the completion of the street car line to the top of Cote des Neiges hill. Subsequently it was found that the final completion date was not 1899 but was 1902. Recent events such as the discovery of the old rails, and the compilation of a great deal of research (much more than was originally thought necessary), make it timely to print the article now rather than wait until 2002. So without further ado we present the story of one of the most interesting street car lines in Montreal, or any other city in Canada - Cote des Neiges hill.



Relics of the past. Street car rails uncovered on Cote des Neiges road on June 13, 2000. In the background of the left photo behind the church (demolished in 2001) is the location of the original street car line used from 1899 to 1917. Photos by Fred Angus

On June 13 2000 a crew of city workers digging a trench for electrical conduits at the corner of Cote des Neiges Road and Dr. Penfield Ave. in Montreal received an unpleasant surprise. Suddenly their digger struck a solid object which would not budge. A quick look disclosed that it was a steel street car rail, and very soon after that three more were encountered barely six inches below the surface. That afternoon a power shovel was brought into action, hooked on to one of the rails and pulled with full power. The rail lifted an inch or two but fell back into place when the shovel was unhooked. After more than an hour of fruitless effort, the workers admitted defeat and tunneled under the rails. Two months later, as the project to rebuild the intersection continued, it was necessary to remove a short section of track, but this was done by cutting through the rails and not by brute force. All the rest of the track was re-buried and remains in place. Unused for forty-five years, and only briefly exposed in the year 2000, these were the tracks of the once-famous street car line on the Cote des Neiges hill, one of the steepest tram lines in Canada, a very busy route which climbed the hill from 1898 to 1955.

The city of Montreal was founded in 1642 in the area between the St. Lawrence river and Mount Royal. As time went on other towns and villages were also established on the island, and the city itself grew, both by its own expansion and by absorbing other towns, until it completely surrounded the mountain. Although many other municipalities still exist on the island, present plans call for all of them to be amalgamated with Montreal by the beginning of the year 2002, so the city will occupy the entire island, completing 360 years of evolution. Although the mountain appears like a single mass, it actually consists of two distinct portions, Mount Royal itself to the east, and Westmount Mountain (the "little mountain") to the west. Between the two portions of the mountain the ground is distinctly lower forming a pass from north to south. Immediately north of this pass the village of Cote des Neiges (literally translated as "hillside of snows", a most appropriate name) was established as early as the seventeenth century. Soon a road, known as the Cote des Neiges road, was built between the two mountains connecting the village with Montreal which was then more than three miles away.

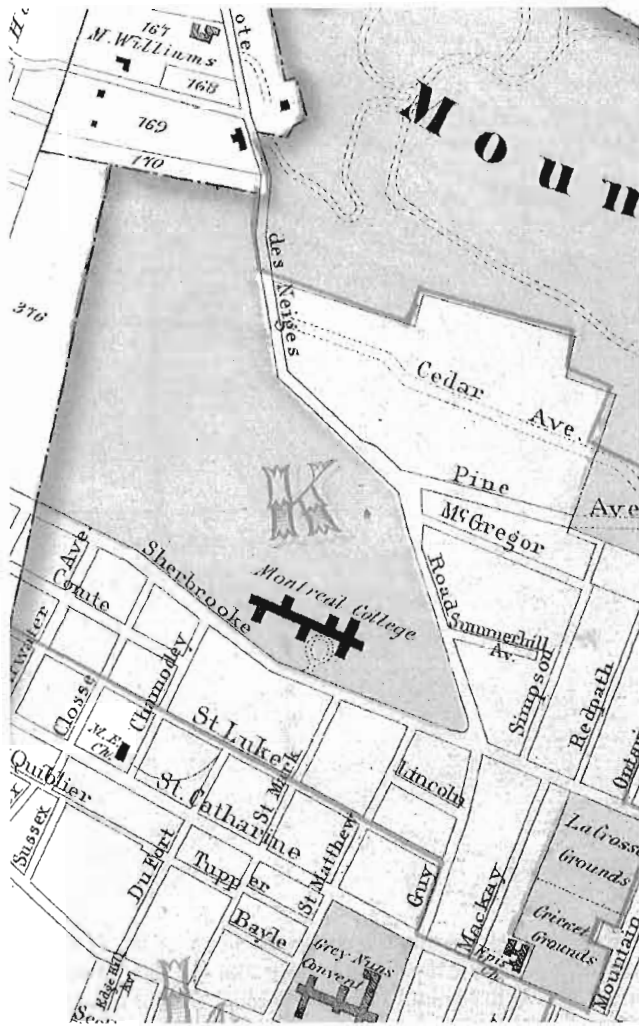


Looking down Cote des Neiges road from a point near the toll gate in 1859. The steepness of the hill is quite apparent. Note Victoria Bridge under construction, which dates the photo. The wall to the right forms the boundary of the "Priest's Farm" owned by the Sulpician Order. The part of the wall in the foreground is the place where, more than forty years later, the street car line left the road to go on to the private right of way. McCord Museum, Notman Collection, photo 7047.

By 1850 this road was a busy thoroughfare since it was the shortest distance to the growing area to the north west of the city, even though it involved climbing a steep grade with horse drawn vehicles, carriages and wagons in summer and sleighs in winter. A toll gate was established at the city limits, just before the road reached its summit, almost five hundred feet above sea level. The tolls collected at this gate were used to maintain the road and keep it in good condition. In those days the road was steeper than it is now, for it was not until after Montreal annexed the village of Cote des Neiges in 1908 that a major cut was made into the mountainside to ease the grade. It is said that one gentleman who built a house near the summit in 1848 intended to live in it year round and commute to Montreal; however he gave

up this plan after a few months as the effort of climbing the hill was simply too great, in the heavy snowstorms that were then so frequent.

In 1861 permanent public city transportation came to Montreal with the establishment of the Montreal City Passenger Railway. At first confined to the downtown area, the horse car and omnibus lines were gradually extended into the more outlying areas. An omnibus and sleigh service was established to Mount Royal Vale behind the mountain, but this went around and did not attempt the Cote des Neiges hill. The major expansion of the system, which had become the Montreal Street Railway in 1886, had to wait until operation by electric power began in 1892. Only a few months after the first electric car made its first run, and long



This map, printed in 1879, shows the route that would later be followed by the car line. The "Priest's Farm" is indicated by the letter "K". The city limits were just below the lot numbered 170, and the toll gate was to the right of lot 169.

Cote des Neiges

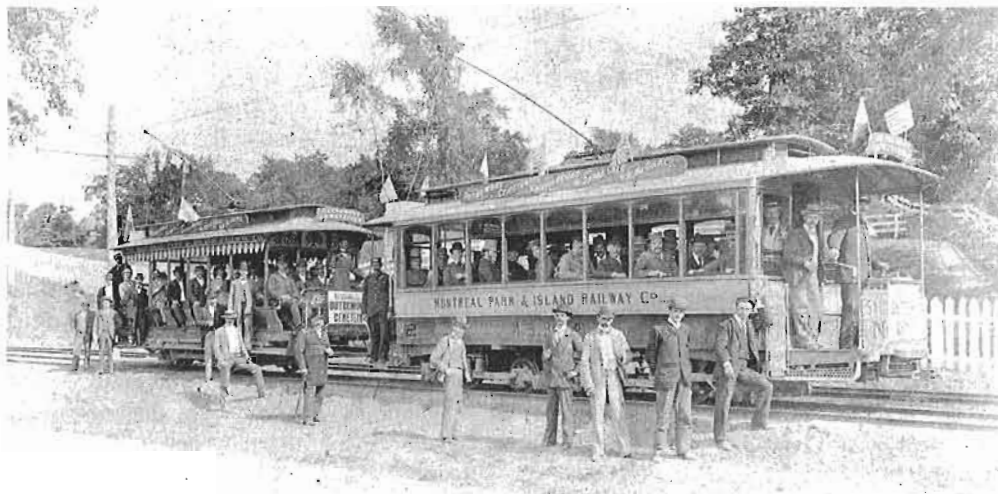
TOLL BAR.

8 Jan 1875 1875
[Signature]

A ticket, dated 1875, from the Cote des Neiges toll gate. At that time tolls were collected on most major roads entering the city. This ticket survived because someone used the back of it to copy a cooking recipe!

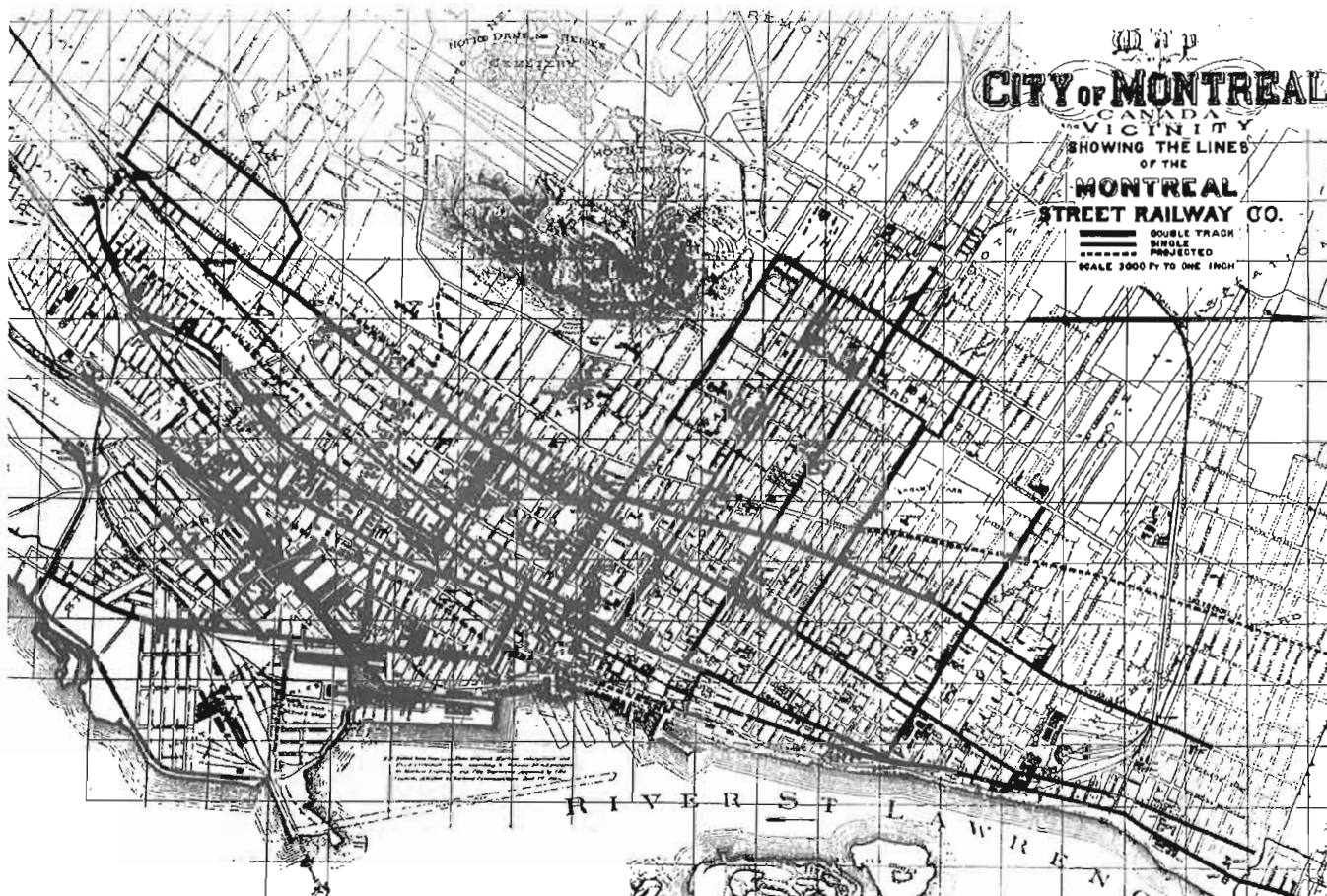


The sleigh, operated by the City Passenger Railway, that went to Mount Royal Vale. The photo was taken in 1927, many years after these sleighs were retired. This one is now at the Canadian Railway Museum.



The first run of the Montreal Park and Island line to the village of Cote des Neiges, photographed en route on August 1, 1894. The photo appeared in "Le Monde Illustré" a few days later.

before the last horse car was retired, another company announced plans to build a network of suburban electric lines which would connect with the MSR. This was the Montreal Park and Island Railway which had been established in the 1880s but was dormant until electric operation became feasible. Between 1893 and 1897 the MP&IR built many miles of suburban lines, but fell into financial hard times and was taken over by the MSR in 1901. For more information on the MP&IR the reader is referred to the excellent article by the late Richard M. Binns in Canadian Rail No. 433, March-April 1993. The big day for the village of Cote des Neiges was August 1 1894, for on that day the first MP&IR car arrived, inaugurating an electric service that would last



This map of Montreal dates from about 1895, and is of considerable interest because it shows all lines of the Montreal Street Railway then operating, as well as those proposed and called for in By-law 210 of 1892. Note that the Guy street line is shown as only extending up Cote des Neiges as far as Pine avenue. This is the point to which the MSR (rather reluctantly) built in 1898. The lines on St. Luke / Burnside (now de Maisonneuve) and Sherbrooke street east were never built.

National Archives of Canada, Merrilees Collection, photo No. PA-167048.

for 64 years. The route followed was around the mountain by its east and north sides. However there was hope of someday having a connection by the shorter route - up and over.

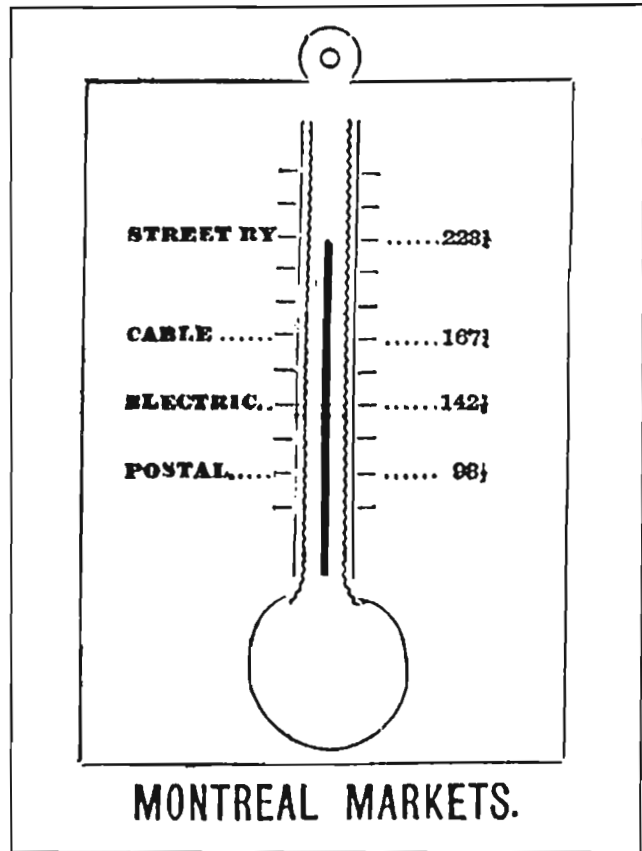
On December 21 1892, exactly three months after the start of electric service, the Montreal City council passed by-law No. 210 entitled "By-law concerning the establishment and operation of an electric passenger railway in the City of Montreal by the Montreal Street Railway Company". This document set forth the various conditions and terms of reference for the operation of the electric railway. Among other things it listed 19 routes "in which the company shall establish and operate their electric passenger railway". Some of these lines were built as planned, others were modified, and at least two were never built at all. Although the routes were referred to by number, no route numbers were used until 1924, the lines being referred to by name only. It is only coincidence that No. 14 on the list is the one with which we are concerned, and many years later route 14 did run on Cote des Neiges. The 1892 route 14 was to be called "Wellington and Cote des Neiges" and was described as "To be double tracked on Wellington street northerly to McCord, to Mountain, to St. Catherine, to the Cote des Neiges road, giving transfers on Notre Dame, St.

Antoine, east and west bound, St. Catherine route east and west". Section 41 of by-law 210 stated that "In case the Company should, at any time, fail to comply with or contravene any of the conditions or obligations imposed upon them by the present by-law they shall be liable to and incur a penalty not exceeding twenty-five dollars for each and every day they shall neglect to comply with, or contravene any of the said conditions or obligations". Although the by-law did not specifically state how far up Cote des Neiges the line was to run, this was clarified by a subsequent meeting in 1893 to mean as far as the city limits, just before the summit. Also discussed was a possible further extension to the gates of the cemetery, and another extension westward into the upper level of Westmount, then known as Cote St. Antoine, which was just starting to be developed. The arrival of the MP&IR at Cote des Neiges the next year by a different route eased the pressure to build the cemetery extension, but the line to the city limits was supposed to be high on the agenda, and was to be completed by September 1, 1895. The term "supposed" is well taken, for the MSR did little to build the line, and for the next several years there unfolded the "saga of the Cote des Neiges line", a story full of discussions, arguments, threats, and a considerable amount of humour and sarcasm with a rather ironic conclusion.

For the first two or three years following the start of electric service the MSR had its hands full with the conversion. There were lots of problems such as replacing the old horse car rail with heavier girder rail, obtaining sufficient electric cars, erecting power houses and the power distribution system, not to mention snow fighting to keep the electric lines open year round. Gradually, however, the problems were solved and the last horse car ran in October, 1894. New rolling stock, from numerous builders, eased the car problem, and it was soon obvious that the electric system was a success even though not all the required lines had been built. September 1 1895 rolled around and the Cote des Neiges line was not even announced, let alone built. Questions began to be asked, and the company's answers were evasive. By mid 1896 it seemed that the MSR had little intention of building the line unless forced to. About this time the newspapers took up the story and before long it had become a "cause celebre" and a popular topic of conversation.

In the meantime another plan had been brought forth in order to reach upper Westmount. Early in 1894 a group of promoters, not associated with the MSR, announced a plan to build a "mountain railway" in the town of Cote St. Antoine, which was to become Westmount in 1895. The proposed line was to connect with the street railway at Sherbrooke Street and proceed by means of the very steep hill on either Mountain avenue or Clarke avenue to the Boulevard, provided that the town would exempt the railway from taxes on its improvements. The company would charge a fare of 5 cents and would have an exclusive franchise for 30 years. At a meeting of the Cote St. Antoine council on February 19, 1894 there was much discussion and the proposal was approved by a vote of 4 to 2. The promoters of the line made optimistic predictions but nothing was done; perhaps they realized that the route was too steep or, more likely, they could not raise the capital required. Within a few months the scheme was dead and it was realized that if street cars were ever to reach upper Westmount they would have to go via Cote des Neiges Road.

From the start it was generally realized that there would be some engineering problems in constructing a street car line up the Cote des Neiges hill, which, at that time, reached a grade of 12 percent just before the summit. Nothing that steep had been built, entirely by adhesion, anywhere in Canada, and few elsewhere. The company was, with some justification, nervous about the prospect of a loaded car running away and being wrecked, and the directors may well have had nightmares about paying out large damage settlements. There was another reason for the company's reticence. Not many people lived in the area to be served by the new line, and it would not connect with the MP&IR further north. The MSR preferred lines in more built-up areas "where the nickels were the thickest" as the saying went. (Although Canada then used a small silver five cent piece, the United States did use the nickel coin, showing that the term originated south of the border). To a profit-minded corporation this was a significant consideration. Perhaps too the company thought they could get away with ignoring some of the terms of the 1892 agreement, and that the city would be too weak to complain, in spite of the existence of section 41 of the by-law.



Investors in the 1890s kept track of the "high tech" stocks just as they do today. This "stock thermometer" shows the prices on the morning of January 28 1897 for four popular stocks. Montreal Street Railway was far ahead of all others (more than double the par value of 100) showing that the investors approved of the company's management, and were not much worried about the threats to cancel the franchise. On the same day Toronto Railway stock stood at 70, well below par. Incidentally, at that time the Dow Jones index had been in use for less than a year, and stood just over 100.

During the summer of 1896 the MSR constructed the majority of the Guy street line between Wellington street and Sherbrooke street, the place where Guy street becomes Cote des Neiges road. The line was mostly double track except for a few short stretches that were single. Service on the new line did not begin that year as there were two sections which were not completed until 1897, most notably the four track level crossing of the Grand Trunk Railway west of Bonaventure station. This crossing, with its four diamonds, was installed as a single track section. It had switches, controlled by the GTR switchman, at each end which would derail a car if it attempted to cross when a train was coming. At the upper end of the Guy street line at Sherbrooke street, a single cross-over switch was installed in 1896 to allow the use of double ended cars which could cross to the other track for the return trip. This switch was removed in 1898 when the line was finally extended. Having reached Sherbrooke street, the company stopped, arguing that it would be dangerous to go further until the question was studied in more detail.

The battle over extending the line up Cote des Neiges began in real earnest in the fall of 1896, and continued on and off for more than three years. The first action was taken by the city which asked the MSR when construction might be expected to begin. On November 20 1896 the company replied by "proposing to submit to experts the question of the practicability of operating cars upon the hill". The city does not seem to have replied to this letter but, on December 7 unanimously passed a resolution ordering the company to complete the line in accordance with the provisions of section 41 of by-law No. 210. By the new year the whole matter was at an impasse and there was more and more talk of extreme measures, even going so far as threats to cancel the MSR's franchise for the entire city. On January 20 1897 the Montreal Herald, in its lead editorial entitled "Street Railway Difficulty" stated in very strong terms "The Montreal Street Railway Company will have little reason to complain if the City Council should resort to extreme measures in connection with the building of the Guy street and Cote des Neiges line. The company bound itself to build the line, and did so most knowingly. At the time that the tenders were before the Council, several plans of the projected routes were prepared and amended again and again at the request of the tenderers. The Guy street route, like all others, was thoroughly discussed. Now the company sees all sorts of obstacles to its construction. It is difficult to understand its attitude. It is not so very long ago that the company expressed its willingness to build a road around Mount Royal Park, and plans were furnished showing how easily the work could be accomplished. If it was possible safely to ascend to the top of the mountain it surely ought to be equally possible to run up Cote des Neiges hill, which is not steeper than others in the city..... The Council has dealt leniently with the company heretofore, and has consented to several modifications in the contract. But the line must be drawn somewhere, and the point has been reached where summary proceedings are in order. If the company can stand the loss of its franchise, the people can stand the inconvenience of walking for a few days and will take their chance of making a better bargain next time." In reply to all this criticism Alderman Stevenson introduced a motion before City Council that "The contract between the City and the Montreal Street Railway be cancelled for non-fulfillment of its obligations".

A month later little progress had been made, and the motion had not been voted upon. The Herald once again thundered forth in an editorial on February 25 1897. entitled "Control the Street Railway". This time it dealt with many other cases of non compliance with the terms of by-law 210 such as overcrowding, car signs, bilingual conductors and minimum wages. In part it said "Ald. Stevenson's notice of motion to have the contract of the Montreal Street Railway Company cancelled for non-fulfillment of its obligations, which was given several weeks ago, still remains on the order sheet of City Council. It looks as if in this case, as in other circumstances, the aldermen will go on talking, while the company acts as it chooses. For years the people have cried out in vain. The money-grabbing character of all corporations prevents anything like liberality of management, and the number of aldermen who are willing

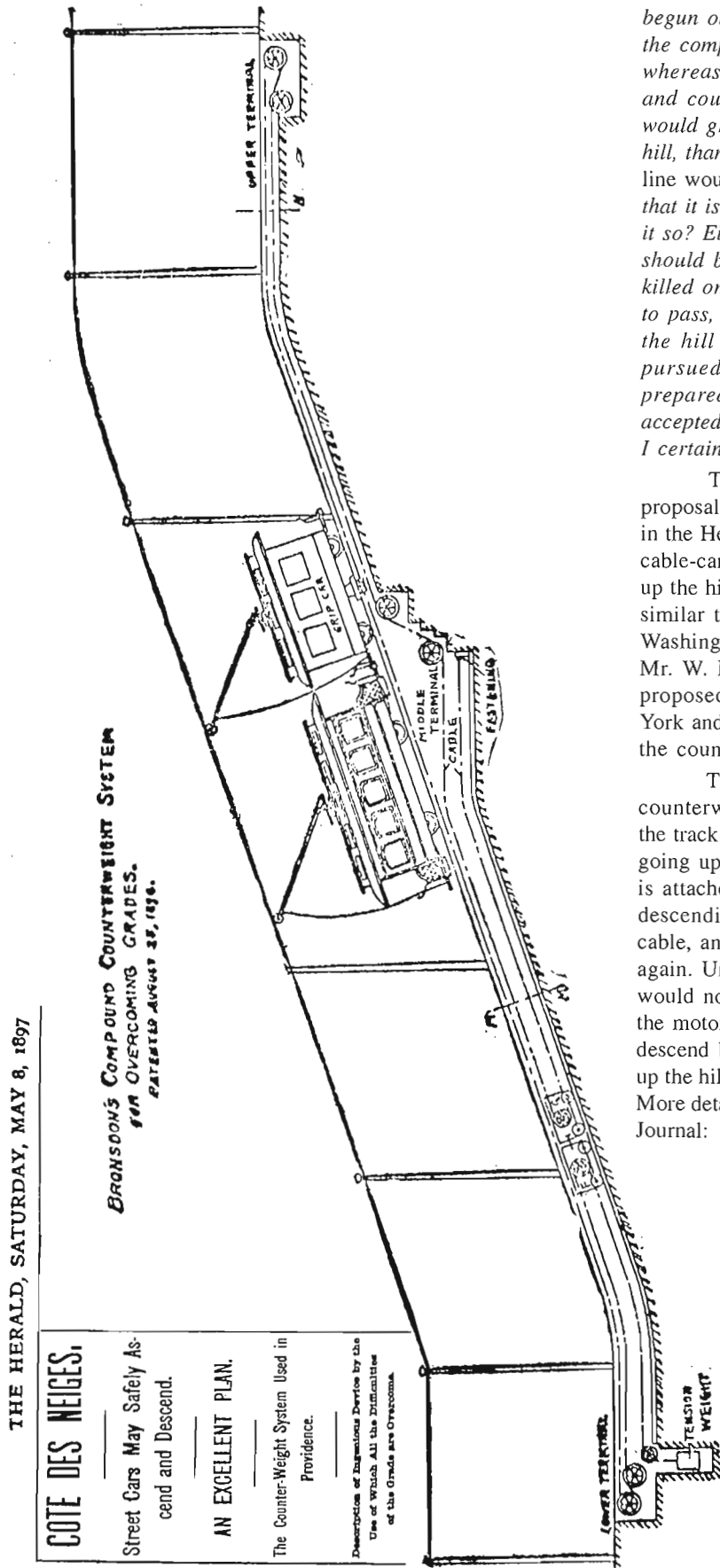
to do their whole duty in opposition to the street railway is certainly very limited.... A line was to be laid on Burnside and Ontario streets, from St. Lawrence to the western city limits, on Sherbrooke street east [these two lines were never built. Ed.], on Frontenac street, and finally the celebrated line from Wellington street up to the Cote des Neiges road. Where are these lines? ...". The public perception of the whole situation was aptly summed up by the short pithy phrase often quoted: "COTE DES NEIGES - NIT! M.S.R.". (The slang expression "nit" was then extremely popular and meant an emphatic no, somewhat like the present day expression "no way". It was quite short-lived and within little more than ten years it had died out).

The big problem was, of course, the steep grades. An analysis of the profile of the hill, from Sherbrooke street to the proposed summit, a distance of about 4050 feet, with a climb of about 288 feet, divided into ten approximately equal sections, shows the gradients to be as follows:

Section 1	1 in 17.67	5.66%
Section 2	1 in 11.56	8.65%
Section 3	1 in 10.13	9.87%
Section 4	1 in 11.32	8.83%
Section 5	1 in 20.73	4.82%
Section 6	1 in 14.7	6.80%
Section 7	1 in 19.92	5.02%
Section 8	1 in 11.9	8.40%
Section 9	1 in 8.33	12.00%
Section 10	1 in 85.47	1.17%
Average	1 in 14.04	7.12%

It can be seen that the steepest grades were near the top and bottom, with the steepest of all being a stretch of 12% just before the site of the old toll gate. There was also a short but sharp increase in grade just south of Pine avenue; part of section 6 but quite a bit more than the average 6.8% of that section.

Soon after the foregoing debates, the MSR proposed a compromise. They would build the line, but only as far as Pine Ave. and would construct the remainder at some unspecified later date. Now it was the city that threw up obstructions by refusing to grant the necessary permits unless the entire line was built. The arguing continued and almost the whole year 1897 was wasted with little done. Ex-Alderman McCord (whose collection of artifacts was the start of the McCord Museum), whose house, "Temple Grove", was near the proposed line, was quite emphatic. When asked if he favoured the compromise he replied, in an interview dated April 3 1897 "I certainly do. I have been misunderstood on this point. You see, I am interested as a property-owner, in having the line go the full distance up the hill, but apart from that, such a line would be of decided benefit to the city. However the company have made an offer to go as far as Pine avenue. I say let us accept the offer, and when we have got that, ask for more. I am sorry that a number of the present aldermen do not see it in that light. Ald. Stevenson, for instance, says 'No, let us not give in to the company. We must have all we want, and all we are entitled to'. I claim it is not giving in, but by accepting the compromise as a part of what we ask, we forfeit no rights, we secure immediate benefits, and we save valuable time. Work should have been



begun on the line now. Instead of that, the city are fighting the company, and the fight might be prolonged indefinitely, whereas we should have the line running in a short time, and could afterwards fight for more. I, and many others, would greatly prefer the street cars to take us partly up the hill, than to have to walk the whole way". When asked if the line would be dangerous, Mr. McCord replied "It is claimed that it is dangerous, but what steps have been taken to prove it so? Either it is dangerous or it is not. If it is not, the line should be constructed; if it is I for one do not wish to be killed on it. Yet the aldermen have allowed a whole winter to pass, and have done practically nothing towards proving the hill to be dangerous or otherwise. They might have pursued their investigations quietly, and so have been prepared to meet the company well fortified, and to have accepted the offer to build up to Pine avenue in the meantime. I certainly hope that something will be done soon".

The question of safety brought forth several strange proposals. Most interesting was the one discussed at length in the Herald of May 8, 1897. This was no less than a partial cable-car system in which regular electric cars were helped up the hill by a system of cables, pulleys and counterweights similar to installations in Providence Rhode Island, Seattle Washington, Portland Oregon and Easton Pennsylvania. A Mr. W. Little, who had taken considerable interest in the proposed street car line, had recently returned from New York and Providence and brought detailed information about the counterweight system.

The principle of the system was that of a counterweight, there being a conduit constructed beneath the track in which a weight would run on wheels. The car, in going up the hill, would grip the cable to which the weight is attached, and would thus be assisted in going up by the descending weight. In going down it would also grip the cable, and its momentum would draw the weight to the top again. Unlike in a conventional cable car system, the cable would not be powered, all motive power being supplied by the motors of the car itself. Of course the car would have to descend before another could go up; there could not be two up the hill at the same time unless they were coupled together. More details were quoted from an article in the Street Railway Journal:

"To reduce any sudden jar which might be caused by the stoppage of the rolling weights at the end of the incline, two air buffers are provided. These are constructed of eight-inch pipe, six feet long with a stuffing box, inside of which moves a seven inch pipe as piston. The latter is provided at its outer end with a screw casting, and the eight-inch, or cylinder pipe, is fitted with a three-inch check valve and three-quarter inch air cock. The piston carries at the outer end a small pawl for engaging a notch at the end of the rear balance weight. When the car descends the grade as shown, the weights are at the foot of the incline, the buffer piston within the cylinder and the pawl in the detent at the end of the lower weight. As the weights rise the piston is carried with them until fully drawn out, when the pawl is automatically disengaged, leaving the cushion adjusted to be used as the weights descend again.

The incline for Cote des Neiges proposed in the spring of 1897.



This rare map was printed in May 1899 and shows the entire Guy street line as completed to Pine avenue late in 1898. The cars were turned on a wye there until 1902.

The method of making connection between the car and the cable is thus described: There is a T-shaped tongue and lever, connected to the cable and projecting above the cable slot. This is engaged automatically by a special device carried on the rear of the car. Here the tongue enters the U-shaped bar in the centre of this device, pushing past the lever. The lever is held stationary by an eccentric, and is released when the motorman wishes to sever connection with the cable, when the eccentric is drawn back. The cars have no difficulty in mounting the grade with the General Electric controller handle on the sixth notch, at a speed equal to that attained on a 4 percent grade. In descending the grade, power is required and the controller is placed on the second notch, except where there is a very full load, when the brakes only are used.

There is some evidence that both the MSR and the city took the proposal seriously enough to send someone to Providence to see more details. However no one could predict how such a complicated system would work in the heavy snow for which Cote des Neiges is famous (and is named). Needless to say, the counterweight system was never tried in Montreal. By chance or design, the Herald printed, right alongside the article on the counterweight system, a new poem about Canada, written by the noted poet Rudyard Kipling. The poem was called "Our Lady of the Snows".

The company did make a start and erected poles for overhead wire north of Sherbrooke street, up Cote des Neiges for several hundred feet. If they thought that would quiet the critics it didn't work. On September 10 our old friend William Little (he of the counterweight proposal) published a letter which said in part: "*It is now, as you are aware, four years since the Montreal Street Railway Company entered into a contract with the City of Montreal to have an electric street car service running up the Cote des Neiges Hill to the city limits, whereby the public could get to the Park and to the Cote des Neiges Cemetery from all parts of the city at a single fare, and engaged, under penalty of forfeiting its deposit of \$25,000, to have this line, along with the others therein specified, completed on or before the first day of September 1895, now two years ago; and further stipulated a liability of \$25 a day for each and every day thereafter if the work was not done by the time mentioned, so that for the two years ending on September 1st, an additional sum of \$18,250 was due the city... Having wheedled the city out of a franchise worth ten millions of dollars, it seems to be so contemptibly mean as to refuse to operate lines on any streets except those that will return big profits.*" At a meeting of City Council on September 27 permission was given to the MSR to build as far as Cedar avenue (just below the start of the controversial 12% grade). The City also ordered the company to complete the line as far as Pine avenue by November 1, without waiving any of the rights of the city or the company as to proceeding to the city limits. As expected, Ald. Stevenson made a very lengthy speech highly critical of the MSR, but the motion was passed, and at a further meeting on October 18, the two-year old resolution ordering the construction was voted upon and passed.

The scene then shifted to the courtroom as the city filed an action against the MSR, seeking a court order for the company to build the line, as per the 1892 contract and many meetings of City Council. During the proceedings many arguments were heard, and the company actually claimed to have misplaced a letter, dated May 3 1897, from the city ordering them to proceed with construction. Once in the courts the whole affair bogged down in legal wrangling, winter came and went, and by the summer of 1898 things were seemingly no further advanced than they had been eight months before.

Gradually the whole business dropped out of the news, but behind the scenes progress was being made and the city quietly agreed to drop its court case if the line was

built. Although not generally known at the time, other negotiations were also in progress which would prove to be of great importance a year later. Early in September 1898 the MSR announced that they would complete the line to Pine avenue. *La Presse*, in its issue of September 8, said "*La Compagnie du Chemin de Fer Urbain va commencer, aujourd'hui, la construction de sa ligne sur la rue Guy, jusqu'à l'avenue des Pins, sur le chemin de la Côte des Neiges. Voilà une nouvelle qui, sans doute, va faire plaisir aux citoyens de la partie ouest. La compagnie a obtenu le droit de passage de la part du séminaire et le comité des chemins a résolu de suspendre les procédures prises contre elle. C'est la fin de la difficulté*".

Actually it was not quite the end of the difficulty and work did not begin for another week. Construction began the morning of September 16, ironically only a few hours after the tragic Hochelaga car barn fire which had destroyed 72 of the company's street cars. There was a week's suspension of work on September 20 because of some legal difficulties, but work then continued, and before the first snow in the fall of 1898 street cars were running as far as Pine avenue, still about 2850 feet short of the intended terminus (2100 feet to the city limits and 750 feet beyond), but considerable progress nonetheless. The cross over at Sherbrooke street was removed and a wye was installed at the corner of Pine avenue. By means of this wye, which was in place only until 1902, the northbound cars could turn east via a sharp curve on to Pine, back on to the southbound lane of Cote des Neiges and return downtown on the southbound track. The author's father, who was born in 1895 and lived in a house overlooking that corner from 1896 to 1900, said he used to watch, from his bedroom window, the cars being turned.

The new year of 1899 brought another twist to the story. The MSR sought permission to build a street car line via Beaver Hall Hill, Dorchester and University streets to connect with the St. Catherine street line. This would make a direct connection between downtown and uptown and ease the overcrowding on the other lines. In the meantime some of the cars coming up Guy street from Wellington street were turned west on St. Catherine instead of continuing further north. There was one big objection to the Beaver Hall Hill plan; it would have to use a portion of Dorchester street, which was then residential. By-law No. 210 of 1892 contained the clause "*NO LINES shall be laid on Dorchester street by any company, but should the council decide, at any time to do so, the Montreal Street Railway Company shall have the preference of laying and using the line*". It was delicately (perhaps not very delicately) suggested to the MSR that there might be a "saw-off", i.e. permission might be given to build on Dorchester if the Cote des Neiges line was completed! Regarding gradients, the City Surveyor reported that the maximum grade on the proposed Beaver Hall Hill line would be 10.01% for 310 feet which would make it (just barely) the steepest in the city. This compared with a maximum of 9.00% for 100 feet on the Windsor street line and 10.00% for 265 feet on the Guy street line north of St. Antoine street. None of these grades, however, would equal the 12.00% on the proposed extension of the Cote des Neiges line. On June 29, 1899 the *Montreal Witness* reported

that "*The resolution passed by the Road Committee to refuse the permission [to build the Beaver Hall Hill line] until the company has completed its Guy street line up Cote des Neiges hill may cause some delay, but it is expected in municipal circles that the company will make the required extension to secure the right to build its much needed line up Beaver Hall Hill*". Suddenly it looked as if the stalemate might be broken, however there was still one major problem - that troublesome 12% grade. The grade could be reduced by digging an expensive rock cut near the summit (which was done a decade later), but until then it would have to be up and over the 12% or there would be no line. Then someone had a thought - was there another way?

Herald.

FRIDAY, JULY 21, 1899.

ENDORSES THE NEW WESTMOUNT LINE

Roads Committee This Morning Hears
the Scheme Explained and
Approves of it.

GOES TO COUNCIL NOW.

Will Go Around the Heavy Grade on
Cote des Neiges Road to
Westmount Avenue.

The news breaks! There was an alternative to the 12% grade, and the secret negotiations with the Seminary were successful. The way seemed clear for street cars to run to the summit.

Friday, July 21 1899 is noted in history for two events, the death of the famous freethinker Robert Ingersoll, and the birth of the author Earnest Hemmingway. Locally there was, early in the morning, a terrific thunderstorm which caused considerable damage. None of these events has the slightest connection with our story, but it was on that day that the announcement was made that broke the stalemate. The *Montreal Star*, under the heading "A New Street Car Line", reported "*The Montreal Street Railway is arranging to build a second street car line into Westmount.... The railway has now concluded an arrangement with the Seminary of Saint Sulpice by which it secures the right of way over 30,625 [square] feet of land running through the seminary's property.... Thirty cents a foot is the price agreed upon, bringing the total up to \$9,187.50. The railway intend to build the line from the present terminus of the Guy street line up the Cote des Neiges road, a short distance beyond Cedar avenue, through the seminary grounds, on what was at one time intended for Elm avenue*".

By this plan the line would run around the heavy grade, but would still terminate at or just beyond the city limits and close to the entrance to the park. It turned out that quiet negotiations had been going on between the MSR and the Sulpicians for at least a year and the stalling by the company had been partly to gain time for the negotiations to be concluded.



The heading of the article that described the new plan

The details of the new plan were made clear in a letter sent to the Road Committee and published in the Montreal newspapers on July 28 1899 by Frederick L. Wanklyn, manager and Chief Engineer of the MSR.

To the chairman of the Road Committee -

Dear Sir, -

Regarding the Cote des Neiges line.

With further reference to my letter of August 19, 1898, and your reply embodied in the extract from the minutes of a meeting of the Road Committee held on September 6th, 1898, which refers to certain negotiations between the Company and the Seminary for a right of way through their property which would enable the company to build a safe line to the city limits; also letter of October 20, 1898, to our president.

I have every reason to believe that the negotiations with the gentlemen of the Seminary, in respect to the said right of way, can be satisfactorily concluded, providing the City Council will accept the route as indicated in the attached plan as a final solution of the Cote des Neiges difficulty. In building on the right of way as shown, we will be in a position not only to take the public to the city limits, but some 750 feet beyond, and within about 300 feet of the entrance to the park opposite Westmount avenue on the Cote des Neiges road.

I trust that your committee will favourably entertain this proposition, and report to the Council without delay, as we are anxious to get the matter finally disposed of and proceed with the construction of the line.

(Signed) F.L. Wanklyn

Manager and Chief Engineer.

[Note: The portion of the Boulevard which extends east through Montreal to Cote des Neiges was known as Westmount avenue for many years. Since there is also a Westmount avenue in Westmount, this was confusing and

eventually the entire road became the Boulevard. To avoid further confusion we will use the latter name throughout this article, even though it might have used the former name at the time under consideration.]

On August 18 City Council gave its approval, and the headlines read "IT WILL NOW BE BUILT". But by September 12 nothing had been done and the old complaints were heard in City Council for one more time. Alderman Jacques moved that the city attorneys be instructed to take action against the company for non-fulfillment of the contract, but it was explained that the delay was due to negotiations with the Mackay Institute over the use of a small piece of their property. The motion was allowed to drop, and within a few days the Mackay negotiations were completed. Work began on Monday, October 2, and on October 4 the Gazette reported that "*The Company reports having put a gang of men at work on the Cote des Neiges line, which will be constructed to the city limits on that road*". However the news was slow to filter down to City hall for at a meeting on October 9, when the question of the Beaver Hall Hill line came up, Alderman Jacques revived his old motion about taking legal action against the MSR, and, true to form, Alderman Stevenson said that nothing had been done. However Alderman Ames saved the day by saying that he had seen the work the day before and it was advanced 600 feet beyond the Pine avenue terminus and proceeding well. Somewhat embarrassed, Alderman Jacques withdrew his motion. It seemed as if the long struggle was over.

We now come to the most ironic part of the story. The work of building the double track line north of Pine avenue continued after October 9 when it had been reported that 600 feet had been completed. Soon the west (southbound) track reached Cedar avenue, more than 1200 feet beyond Pine, with the east (northbound) track about 100 feet behind. Just beyond was the start of the right of way through the seminary property. The city limits were in sight, and two or three weeks would see the line at the summit. Then, just about the time the first snow fell, the work stopped, not to be resumed for more than two years! On December 1, 1899 a short report stated that "*Westmount Corporation having dropped their proposal to run a street railway track across the Trafalgar Institute property [along the Boulevard just west of Cote des Neiges], are about to reconsider the construction of a railway from Sherbrooke street to the Boulevard to be ultimately extended around the mountain in Westmount*". Evidently Westmount was reconsidering the old plan of 1894 and had decided to give up on the idea of connecting at Cote des Neiges road.

With the Westmount connection out of the picture there was no point in the MSR building beyond Cedar avenue as there were only two or three houses in the area. So the project was stalled again. Meanwhile the line continued to run to Pine avenue, turning on the 1898 wye. It is not certain how much service (if any) was run to Cedar avenue over the 1899 track. The southbound track was directly connected to the tail track of the wye and could have easily been used by simply backing up the hill from Pine to Cedar after turning, in fact it is likely that this was done. However the northbound track was not connected at either end, so obviously sat there unused.

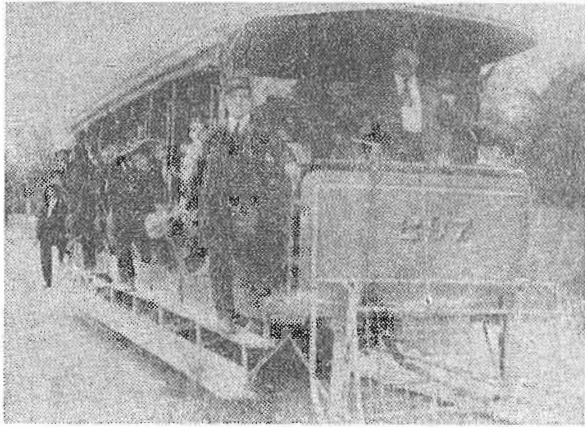
This photo shows either car 546 or 548 (the last digit is not very clear) coming down Guy street just above St Catherine. It is claimed that this is just after the big snowstorm of February 1899, but it could also be the even bigger storm of early March 1900. The photo is early because the car is still painted in the old style dark livery, which was phased out after late 1897. It bears a fender of the 1894 design which was replaced with either the Sleeman type or (more usually) the "basket" type starting in September 1899, although some cars used the old type well into 1900. Note the huge snow banks. Some of the buildings on the right are still standing.



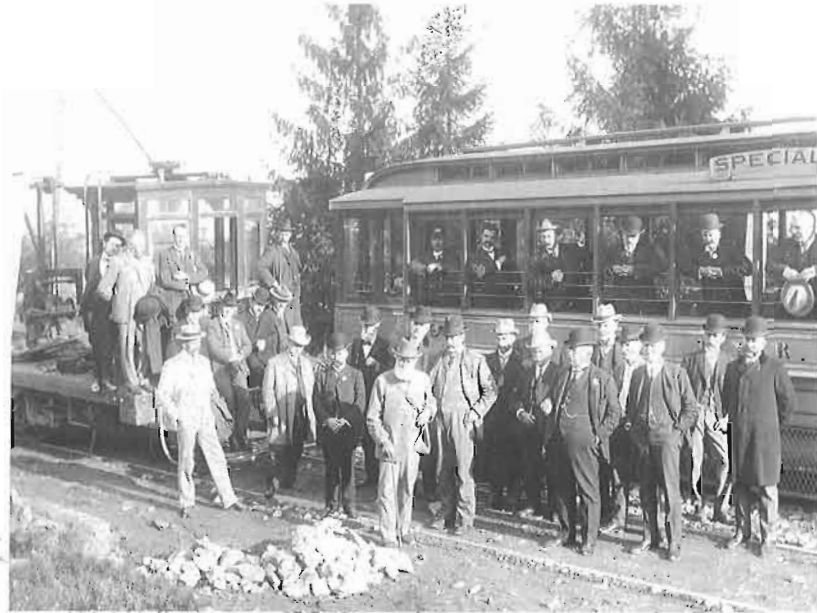
Two years later things started moving again and The Cote des Neiges extension was included in the MSR's construction plans for 1902. The track was built along the new private right of way across the seminary property, and crossed the Boulevard. A wye was built with a short tail track heading east and the longer one going north as far as Trafalgar avenue. At the same time the 1898 wye at Pine avenue was taken out and, of course, the northbound track was connected up. Finally all was in readiness and one morning in 1902 a car of the MSR left the barns and proceeded to the Guy street line. We do not know if it carried many passengers, if it was a closed car or an open one, whether it was one of the new 600 series, or an older one like No. 274. Reaching Sherbrooke street, the conductor signaled the motorman and the car started up Cote des Neiges. Reaching the former terminus at Pine avenue, the car continued up on the new route. It then turned along the private right of way around the steep grade, passed the city limits, turned east on to one leg of the wye, and backed around on to the tail track near Trafalgar avenue. After a short pause it descended the hill with the motorman keeping tight control with the hand brake. Soon another car passed and went up the hill. At last the Cote des Neiges line was open!

BELOW: A snow sweeper at work on Cote des Neiges, just north of Sherbrooke street, about 1900. This is one of ten sweepers built by the MSR in its own shops in 1898 and 1899. Snow shovels are much in evidence since in spite of the mechanization there was still a great deal of hand work required to keep the lines open after a big snow storm.



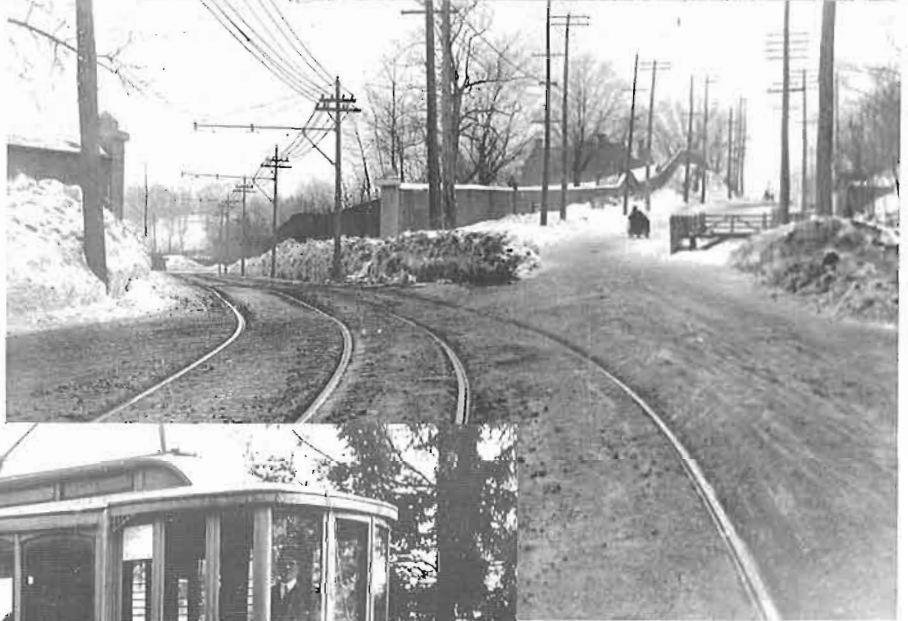


ABOVE: A poor quality photo but a significant one. 1896 open car 297 on the Cote des Neiges line about 1902. The conductor is Joseph Poitras and the motorman is Jack Whittaker.

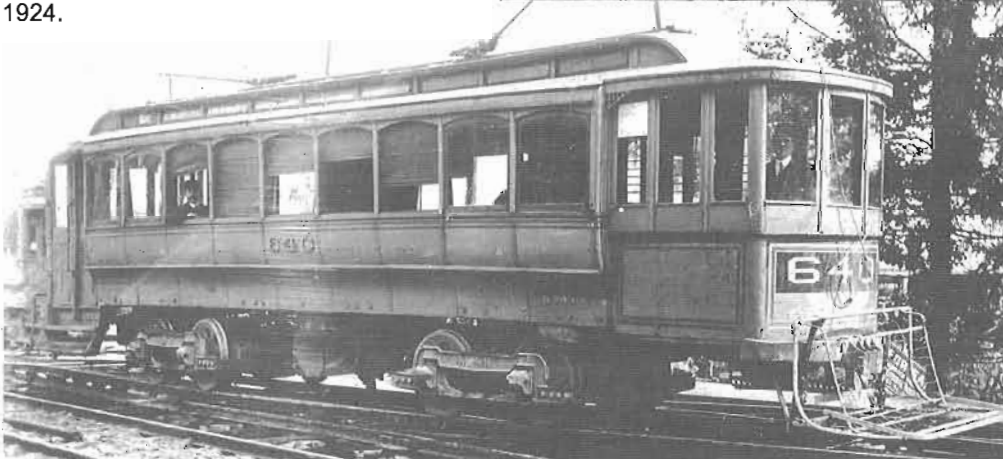


ABOVE, RIGHT: The official opening of the line along Westmount Boulevard in 1904. The MSR's newest car, No. 790, was chosen for the first run.

RIGHT: The lower end of the private right way that was completed through the seminary walls in 1902. This photo was taken on March 12, 1912, soon after the cut (visible on the right) had been made to reduce the grade of the road.



BELOW: double-ender 640 was photographed on October 1, 1912 during track relocation on the Boulevard. These cars were regulars on the upper Cote des Neiges and lower Guy street lines from 1911 to 1924.



in 1910 when a connection was built allowing cars to wye at the Boulevard. Meanwhile, in 1907, the line was extended down Lansdowne, and, in 1909, along Westmount avenue, and down Claremont to Sherbrooke street, so forming

With the line fully operational, all the discussion and controversy about its construction, and its perceived danger, was quickly forgotten. The cars had no difficulty going up the hill, nor were there any runaways coming down. The powerful sweepers had no trouble keeping the tracks clear after even the largest snowfalls.

a loop line. As a matter of interest part of the Claremont section had a short 11% grade which was the steepest ever run in Montreal (the maximum on the later mountain line was 10%). So upper Westmount finally got its street car line which greatly aided the development of that part of the city.

For the next two years little changed. Then in 1904 the route was extended west into Westmount and along the Boulevard to Lansdowne. The old wye at Cote des Neiges was left in place and used to short turn cars. It was removed

The Beaver Hall Hill line was built in 1901, and later (1913) track was laid on Dorchester all the way to Guy. About that time this route was consolidated with the Cote des Neiges line to form a single route called "Guy Beaver Hall". Thus one could go from Place d'Armes to upper Westmount

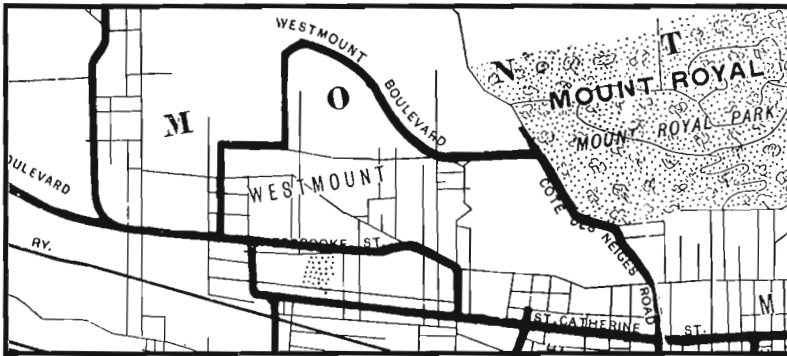


Detail from top photo.



The photos on this page were taken on December 3, 1912 during track reconstruction in connection with changing the level of the street intersection. All were taken at the corner of the Cote des Neiges line and Westmount avenue (now the Boulevard). The top view is looking north, the middle photo looks south, and the one to the right faces east. In the north-looking view (top), double-end car 678, similar to 640 shown opposite, can be seen at the corner of Trafalgar avenue waiting to start its next trip north to the cemetery gates. An enlarged detail from this photo is shown at right middle. This is the only known pre-1925 photo of a tram on the upper Cote des Neiges line. The place where 678 is standing was the northern end of the line from 1902 to 1911. The original wye was just behind the shed with the "Stonewall" sign. It was taken out in 1910 when the connection (seen turning to the right in the middle photo) was installed.

Photos courtesy of STCUM

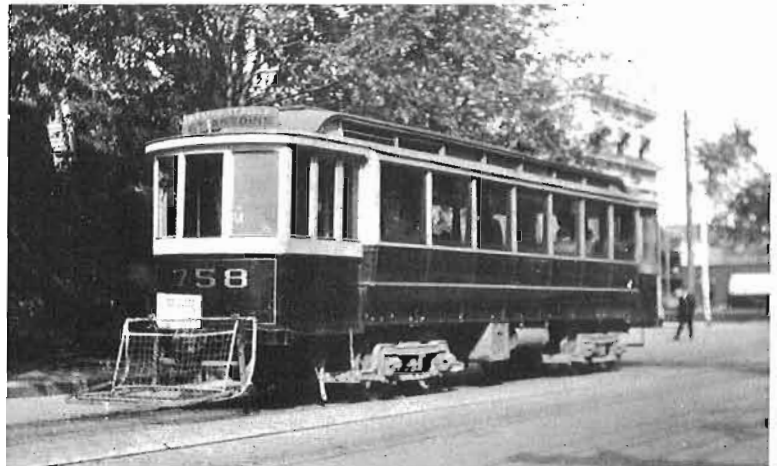


This map, which is not to scale, is taken from the annual report of the Montreal Street Railway for 1910. It shows the Westmount Boulevard line complete, including the sections on Westmount and Claremont avenues. The next year the Cote des Neiges line was extended northwards to the cemetery gates.

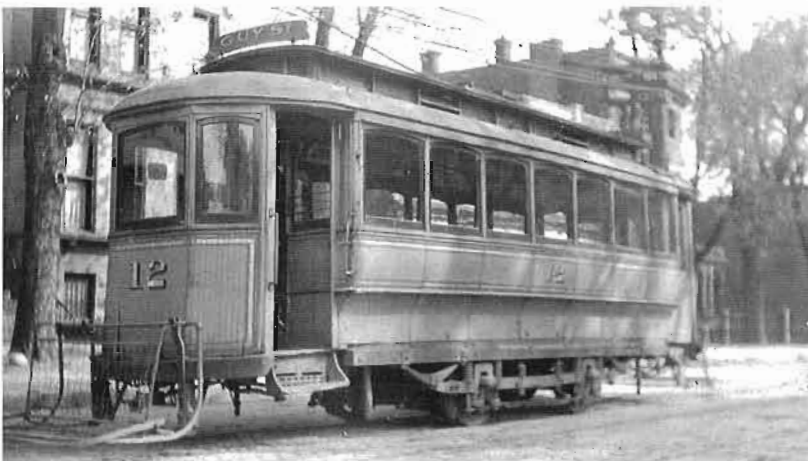
without transferring, something that can not be done today. When the Claremont line was completed and a loop formed, the route in the opposite direction was called "St. Antoine Westmount Boulevard".

In 1908 the Village of Cote des Neiges became part of Montreal, and in 1911 a single track line was extended from Trafalgar avenue to the cemetery gates. A shuttle service was provided from the Boulevard to the cemetery, using double-enders, often converted cars of the 640-class which had originally been built in 1900. This was extended (single track) right through to Queen Mary road in 1919, and a passing siding was built near the cemetery. The main line was still the run along the Boulevard, and larger cars were used there. Starting about 1912 the 740-class early air-brake cars of 1903 were regulars, continuing until about 1920 when they were replaced by the newer 1325-class cars built in 1913-14.

With the line becoming much busier, the grades became more of a problem, and the worst part



From 1912 to about 1920, cars of the 740-class (called the "Windsor Airs") were the regulars on the "Guy Beaver Hall" and "St. Antoine Westmount Boulevard" lines. This photo was taken in 1914.



After the Beaver Hall and Cote des Neiges lines became a through route, the lower Guy line, from Shearer street to St. Catherine street became a separate line, using double-enders. Car 12, seen at Guy and St. Catherine in 1914, was built in 1903 as Montreal Terminal Railway No. 110 and joined the MSR in 1907 when the MTR was absorbed.

was just above Pine avenue near where the old wye of 1898 had been. Accordingly in 1917 the line was turned west at McGregor (now Dr. Penfield) on to a new track which then swung north to join the old line about 200 feet below Cedar, bypassing the worst grade and forming a sort of "island" which still exists. As soon as the cars started using this new diversion, that portion of the old line between Mc Gregor and the point where the new track joined in was torn up. The portion removed was the last section laid in 1898 and about 80% of that laid in 1899. This modification reduced the ruling grade considerably.

In 1924 the old double-enders were replaced by Birney safety cars, and in 1925 the entire line from the Boulevard to Queen Mary was double tracked. On November 19 of that year a new route, called Cote des Neiges 65, replaced the old Birney run, and became a major route running from

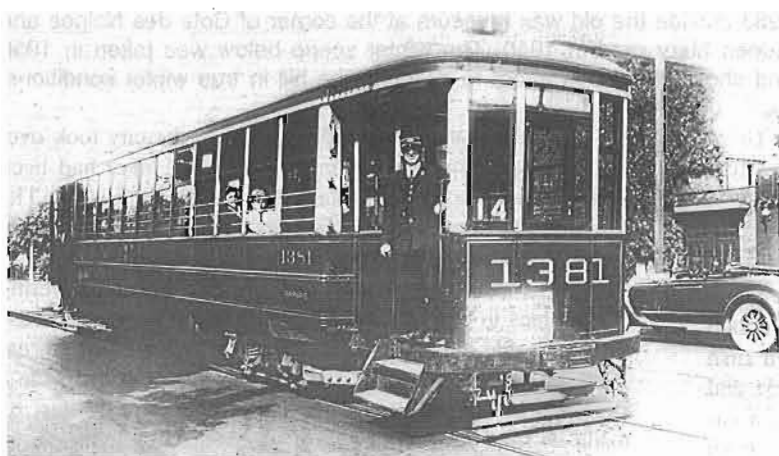
downtown at University street all the way to Queen Mary where it turned on a new loop at Gatineau avenue. On November 19, 1928 it was further extended (via existing track) to Snowdon Junction at Decarie and Queen Mary. After 1924 the "Guy Beaver Hall" (northbound) was numbered 14 while the "St. Antoine Westmount Boulevard" (southbound) was called 47. Thus the strange situation occurred that cars in opposite directions had different route numbers! It was not until 1947 that this anomaly ceased and both directions were called "Guy Beaver Hall" route 14. Below St. Catherine street the Guy street line was operated as a separate route, running south to Centre street at the corner of Shearer. In 1927 a bridge was built carrying Guy street over the CNR tracks and eliminating the level crossings on the CNR main line. This bridge never carried street cars, and the Guy street line was abandoned south of Dorchester, being replaced by the Guy Point St. Charles bus.

About the time these changes took place the 65 and the 14-47 routes were fully modernized when the new 1900-class one-man cars were assigned full-time to these routes. These were the regular cars until 1955, although older trams were run in rush hours. Traffic on the 65 line far exceeded that on the 14 and 47; in fact it was one of the busier lines in the city. In 1949 the 65 line was extended a mile further north to the new Garland Terminal.

The really busy years of the Cote des Neiges line occurred between 1940 and 1955. First were the wartime years when gasoline and tires were rationed and more and more people rode the street cars. After the war the area north of Queen Mary road became completely built up and many of those who lived there travelled downtown on the



One of the Birney cars that was used on the Cote des Neiges extension north of the Boulevard from 1924 to 1925, after which the 65 became a through route.



Old cars of the 1200 and 1325 class were used in rush hours on the 14 and 65 lines right up to the end of service. Here we see 1381 on the 14 (Guy Beaver Hall) line in 1928.

65 since it was many years before the Metro was built, much less extended into the Snowdon area. Although the basic service continued to be provided by the one-man cars, there was more and more use of two-man cars in rush hours. Usually these would be old heavyweight cars of 1913-1914 vintage, since the newer 2-man trams were fully employed in regular service on other lines. In the height of rush hours the 65, and its extra counterpart the 66 (no relation to today's 66 bus) provided service on a headway of two or three minutes. Nevertheless they were incredibly crowded and it was not unusual to see an old two-man car start up the hill with the rear doors still open and people standing on the steps and hanging on to the upright poles. The 14 did not carry as many passengers but since it ran on longer headway the cars were almost as crowded as the 65.

Your editor rode these lines daily in the late 1940s and early 1950s. It was always an impressive ride but, like so many things we see every day, one tended not to appreciate it fully until it was gone. The regular cars were 1900s like the Museum's 1953 and 1959 (1953 was usually a 14 while 1959 was most often seen as a 65). They were nice and comfortable, but the most interesting experience was riding

the old cars that were used in rush hours. Many times I recall deliberately waiting for a 1200-class car which were the oldest permitted on the hill. Starting from Sherbrooke street, the motors would hum and the gears would whine as the car, usually full to the doors, tackled the grade, always slowed down by other traffic on the street. Sometimes, starting from an intermediate stop, the motorman would open the controller a bit too fast. Then the circuit breaker, mounted on the cab ceiling, would let go with a loud bang and bright flash. The car would experience a jolt as the motorman shut off the power, slammed the lever on the breaker (perhaps accompanied by some unprintable words) and opened the controller again, more slowly this time. But the best part was after the car had passed Cedar avenue and turned on to the private right of way. Free from the confinement of street traffic, the motorman would "open her up",

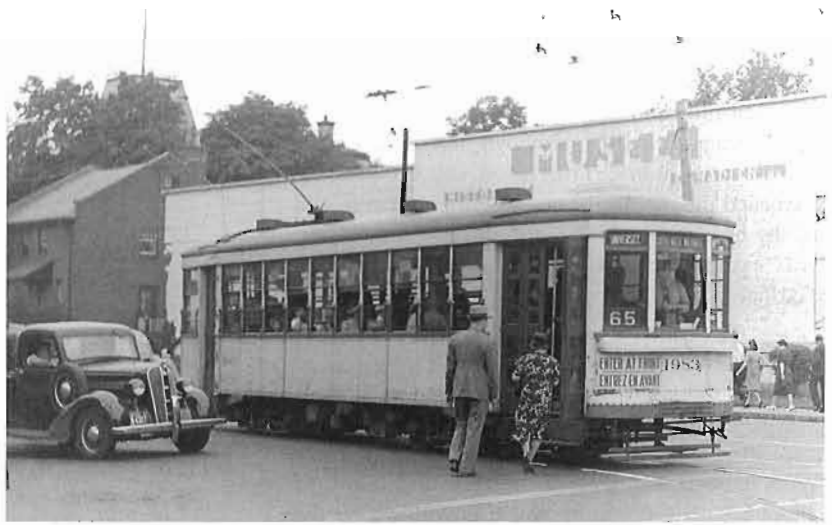


This view, taken at the corner of Guy and Sherbrooke in 1945, shows car 1965 about to ascend the hill hemmed in by rush hour traffic. Note the old 1913 vintage 65 extra going in the opposite direction. Although the number of automobiles was somewhat restricted by wartime shortages, the great increase after 1946 spelled doom for the trams.

and despite the load and the grade, would run the 900 foot length of the PRW in 30 or 40 seconds. On an old 1200 with the motors under full load and the leather straps swinging back and forth, it was an experience that one can not duplicate today, except perhaps in the Isle of Man. If there was time, usually on a regular car in non rush hours, the crew might take a brief rest stop at the shed provided at the junction. Before leaving the car there was a very strict rule to tie down the hand brake to avoid any chance of the car rolling back down the hill.

Coming down there was no fast running due to the danger of a runaway, and so great was the care taken that I have never heard of a street car running away on the Cote des Neiges hill (the same can not be said for other hills like Claremont and Lansdowne). The only incident I actually saw was one morning in the spring of 1952 when riding car number 1953 on the 14 line. It had just turned south on to the right of way at the Boulevard when car 2205, a 66 (rush-hour 65) did not stop in time and banged into 1953. There was no damage except for a cracked window and a few scared passengers, and both cars soon were on their way.

There was a rule that no cars with the older type of controller were permitted to go up the hill. These cars were indicated by a white dot on the right side of the dash where they could be seen by the inspector. The oldest car permitted on the hill was No. 1270, and this was a regular in rush hours. But like all rules there were exceptions. In 1951 and 1952 it was a common sight to see the "daily 29", a car belonging to the "Outremont" route 29, being rerouted from downtown via Cote des Neiges to rejoin its normal route at Queen Mary road and so make up time. Usually this errant tram was an old 901-class car which was definitely not supposed to be on the hill. This usually happened once each day but was quite regular for some time. For a few years in the early 1950s the observation cars were run on two routes, one of which used Cote des Neiges. The route was so arranged that the cars always ran down the hill, returning north on Delorimier avenue.



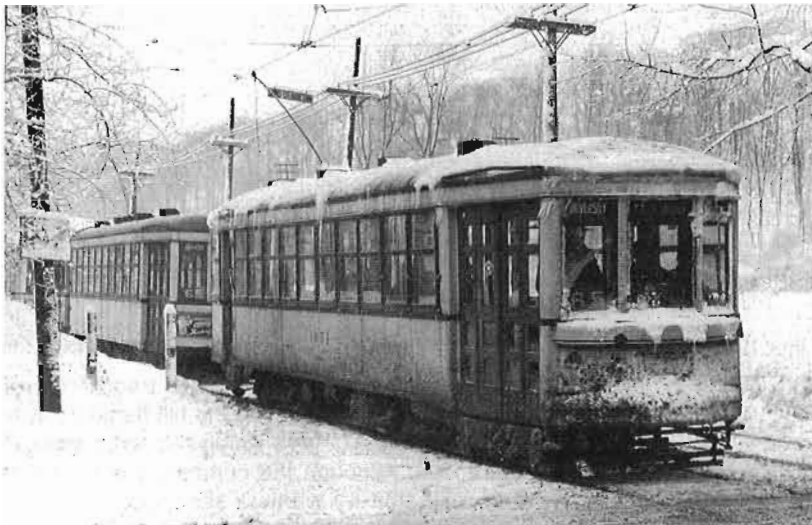
Summer and winter on the Cote des Neiges line! Above is a photo of car 1983 outside the old wax museum at the corner of Cote des Neiges and Queen Mary road in 1940. The winter scene below was taken in 1950 and shows three 65s about to descend the hill in true winter conditions.

The end came in 1955. Ever since the city took over the Montreal Tramways Company in 1951 there had been plans to replace all Montreal's street cars by busses. The Cote des Neiges and Westmount Boulevard lines were converted to bus in the early morning of June 26. On June 25 the CRHA chartered car 1981 and ran an excursion covering all the lines to be discontinued. That night a few "die hards" set out to ride the last runs. Your editor rode the last 14, car 1980, at about 2:00 A.M., and was the last person to ride a street car on the Boulevard. About an hour later the last 65 made its final run, and a few of the passengers joined in an impromptu chorus of "Auld Lang Syne" as the car descended the hill for the last time. It was indeed the end of an era.

The next morning the busses took over, the 65 on Cote des Neiges and the 66 on the Boulevard. The private right of way was closed, but about 1958 it became a street, called McDougall avenue. It was used for southbound traffic, while Cote des Neiges became one way northbound. In 1982 the old route number 65 disappeared when the bus lines were rearranged following the opening of metro extensions.

It is now more than 45 years since the last street car ran on Cote des Neiges, and two generations do not remember them at all. Today the 165 bus climbs the hill, but it isn't the same. Interesting things still do happen; for instance it is not unknown for a crowded bus to stall and be given a shove by another one right behind! This usually happens just below Pine avenue, now the steepest part of the hill, only a few feet from the site of the old wye of 1898. But we will leave the bus stories to some other publication.

So it was that the chance unearthing, in the late spring of 2000, of a few pieces of the old street car track brought recollections of the story of this important line that had such an adventurous birth, and which served the city of Montreal so well for so many years.



The following eleven photos were all taken in June 1955, only a matter of days before the Cote des Neiges street cars made their last run. They cover a good portion of this line as it appeared in its last days. All the cars shown are those regularly assigned to the 65 and 14 lines, since the pictures were taken in non rush hours when the older extras were not running. We have included two photos of Beaver Hall Hill since this was part of the through route in later days, and it does play a part in our story. We hope you will enjoy this nostalgic last look at the Cote des Neiges street cars.

RIGHT: The first of its class, No. 1950, on route 65, coming up Beaver Hall Hill. The abandonment notices are pasted inside the car windows.

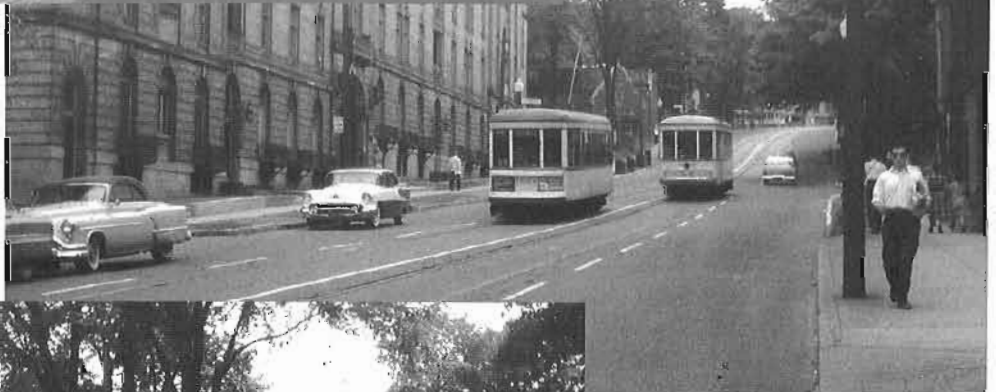
Note the difference in roof line between the 1900-1949 type and the 1950-2004 series built starting two years later.



LEFT: Car 1953, on the 14 line, also coming up Beaver Hall Hill. This car is now at the Canadian Railway Museum.



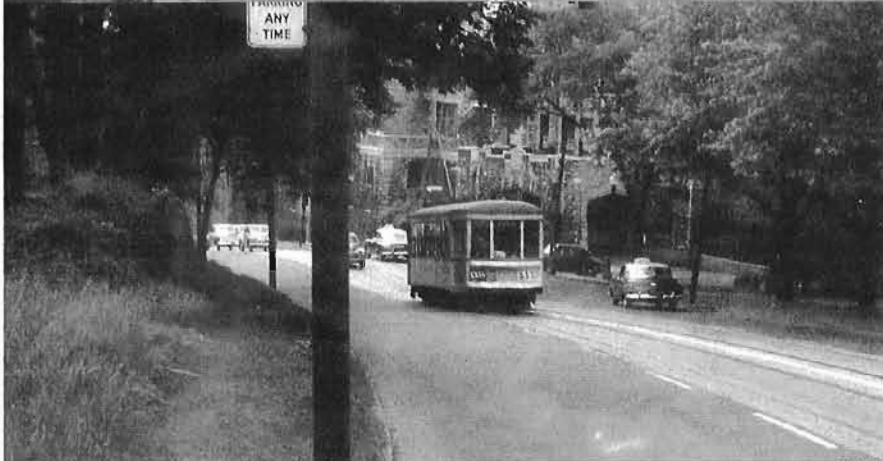
RIGHT: 1934 and 1958 pass each other on Cote des Neiges just above Sherbrooke while another tram is seen in the distance. The apartment building on the left is gone; replaced by a much larger building.



LEFT: Slightly further up the hill, descending car 1962 passes l'Ermitage, a building constructed in 1913 and still standing.



ABOVE: Looking down from above Pine avenue. The original route ran just in front, with the 1898 wye to the left. The white taxi in the centre is near the 1917 relocation where the rails were unearthed in 2000. The church, which was demolished in February 2001, had not yet been built.

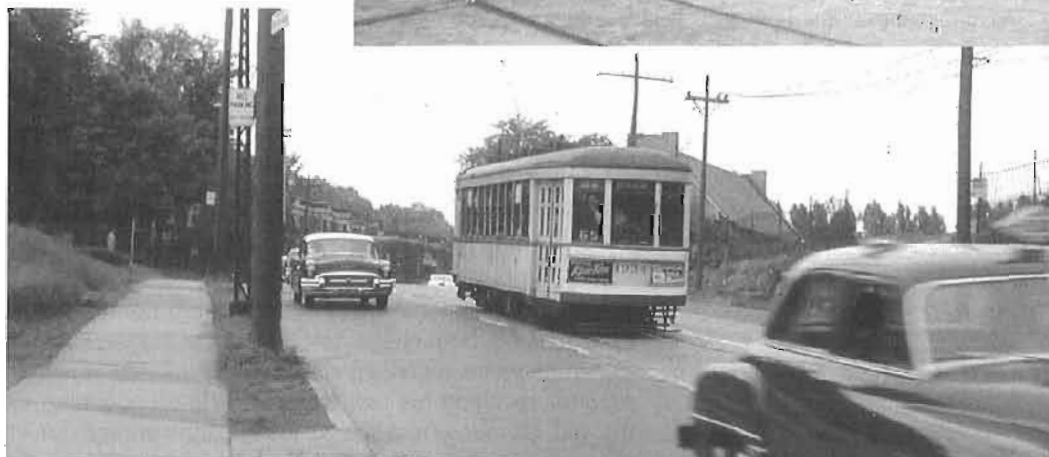
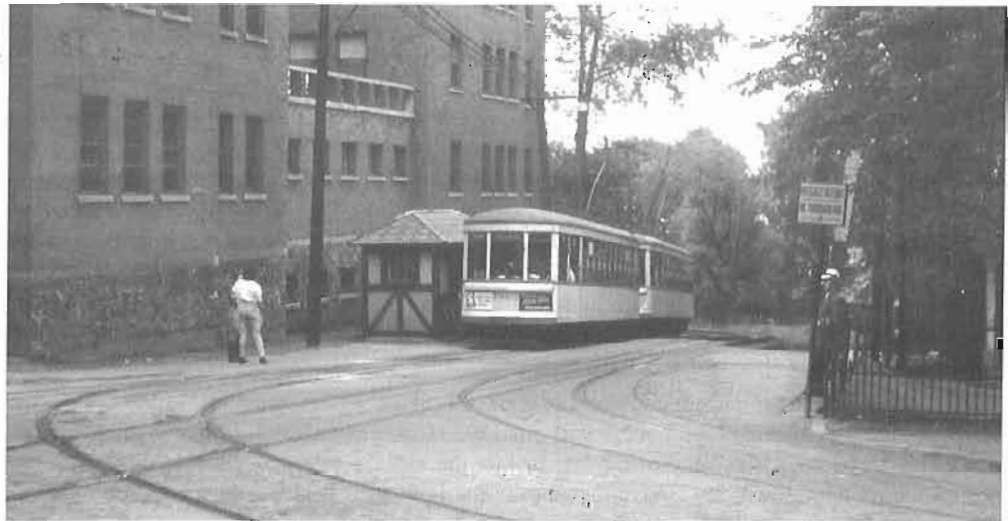


LEFT: Car 1918 passing Sacred Heart Convent. This is the section to which the tracks were relocated in 1917.



BELOW: 1938 descending along the private right of way

RIGHT: 1962 and an unidentified 1965-class car stopped at the shelter behind the Trafalgar apartments. Immediately in front is the switch where the line branches off along the Boulevard. Contrast this photo with the one at the middle of page 19, taken at the same place 43 years earlier.



LEFT: 1934 crests the summit of the hill beside the Cote des Neiges reservoir.

RIGHT: Northbound car 1961 stops at the corner of Remembrance Road. This is where a line used to branch off to go up Mount Royal.



LEFT: 1938 approaching the loop at Gatineau just before turning west on Queen Mary Road en route to Snowdon and Garland terminal.

Between this corner and Garland terminal, trams continued, on the Outremont line, for another three years. Therefore this is a good place to close the book on the story of the era of street cars on the Cote des Neiges hill.

A Ride on the Sweeper in 1893

When electric street car systems began to be built in cities with heavy snowfall, one of the major problems was keeping the tracks clear in winter. Previous horse car systems had traditionally given up the use of tracks in wintertime and substituted enclosed sleighs. The new electric lines, with their higher speeds and greater carrying capacity could not revert to slow horse-drawn sleighs just because snow was on the ground; therefore they had to keep the tracks clear and run electric cars year round.

At that time the most formidable weapon in the street railway arsenal was the sweeper, a snow clearing car with huge revolving brooms that swept the tracks clear with great efficiency. Their practicability in heavy snows had been demonstrated in Ottawa by Ahearn and Soper who had kept the Ottawa Electric Railway running during that first critical winter of 1891-92. Their plan was to get the sweepers out when the snow started to fall and to keep going; a plan that modern snow clearing crews sometimes ignore at their peril.

When Montreal introduced electric cars in 1892 they immediately ordered six sweepers to be built by the Toronto Railway, and they obtained three more early in 1893. This was only 4 1/2 months after the electric cars had been introduced, and the whole technology was state-of-the-art. In fact the electric sweeper was the biggest piece of mechanical equipment that one would see running down city streets (except for the few cases where railways shared street space).

But sometimes weather conditions were such that even the sweeper was defeated. Such a case is vividly described by this article, written in delightful Victorian, almost Dickensian, prose by an un-named reporter for the old Montreal Herald, and published in that paper on February 7, 1893. It is a good follow-up to our history of the Cote des Neiges line. The article was discovered by Doug Smith while researching a totally different subject and was transcribed into the computer during a storm much like the one described. All spelling and punctuation are exactly as in the original article. We hope the readers are in a nice warm room as they read about what it was like to be riding the front platform of the sweeper in some of the worst weather Montreal had to offer 108 years ago.

FLIGHT BY NIGHT

Five Hours in a Blizzard on the Electric Sweeper

A Herald Reporter's Novel Experience - He Accepts an Invitation for a Midnight Ride - How it Feels to go Down-Hill Without Brakes - Something About Track Clearing - Ditched Near Mount Royal.

Ho! For the festive toboggan as it rushed down, down the icy incline with lightning speed, setting time and space at naught in its perilous flight.

Ho! Also for the electric snow sweeper, as it sets at naught great mountains of the beautiful, not to mention Montreal's complaining Jehus.

Ho! Ho! Ho!

Well, this is carnival week and many old time enthusiasts, and many others who in time perhaps will become enthusiasts, will enjoy the novel sensation of a ride on a toboggan in the ideal home of this famed Canadian passtime; but has any Herald reader ever enjoyed the novel experience of a ride on the front platform of an electric street sweeper?

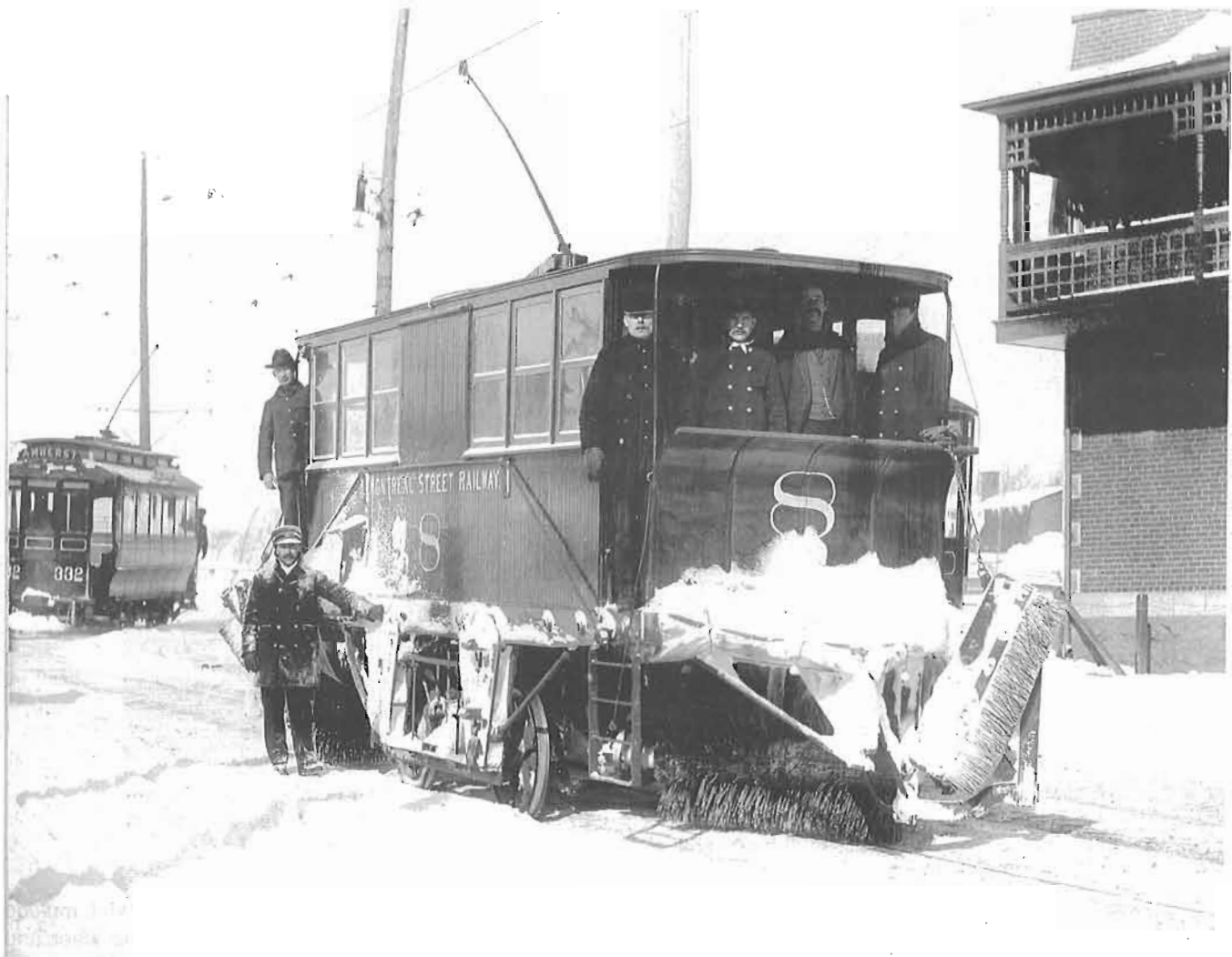
Perhaps, most likely, not. Well then, for their information it may be stated that like unto toboggans, electric sweepers have also their drawbacks, more particularly when a howling blizzard prevails and the mercury in the thermometer crawls down, down, down, and hugs itself in an insane attempt to creep into the bulb, proof positive that the mercury is more sensible than many folk, and knows enough to get in out of the cold.

These statements of drawback are born of actual experience in both cases, for, far back in the years when Montreal winter carnivals were in their infancy, a Herald reporter received his first experience in tobogganing on the old Lansdowne slide; a lesson that proved an all sustaining sufficiency ever since. A night or so ago, he had the first ride on the front platform of the other machine under circumstances like his first, last and only slide on a toboggan, which makes it a memorable one and enough to still forever any ambitious hankerings after novel and untried means of locomotion.

These are also facts, and now to recount an experience on the electric machine aforesaid.

It was fast verging towards the second hour of the morning, viz. Between one and two a.m., when the reporter left the office, his day's labor ended, and tramped down to the corner of Bleury and Craig streets, in the hope of catching one of the all-night uptown cars. The thermometers, such as were capable of it, registered somewhere about 10 below zero. A howling blizzard had prevailed all the previous day, and the greater part of the night. Great banks of snow were piled at either side of the street railway tracks, but in a short interval in the evening a sudden change in temperature had occurred. Rain for a few moments had fallen, and now that the icy blizzard was again in full blast, the tracks themselves were covered with a coating of ice that shone and glistened under the electric lights along the new deserted streets like two long narrow ribbons of silver.

Small hope for an up-town or any other car on a night like this, thought the reporter, as he passed the time of the morning with a half-frozen specimen of Montreal's finest, who sought a precarious shelter in the recessed doorway of the corner drug store.



This electric sweeper is identical to the one on which our reporter took his trip. Note the open platform and dashboard which would make for a very cold ride. Sweeper No. 8 was one of three built by the Toronto Railway for Montreal and delivered in 1893 the year this photo was taken, and the year of the article. It was the same as numbers 1 to 6 built in 1892. Six of the original nine sweepers were destroyed in the Hochelaga car barn fire of 1898, but No. 8 survived until 1925. However it is likely that the one in the story was one of the six burned as the account mentions that it was based at Hochelaga. Car 332 in the background is like the one that the reporter was waiting for on that eventful night.

ON AN ELECTRIC SWEEPER

No chance for a car, muttered the reporter aloud, preparatory to starting on a two-mile tramp, in the storm and cold, when suddenly, as though in contradiction to his half spoken words, there burst into view, far down Craig street, the welcome yellow glare of a headlight. The buzzing of the overhead trolley wire roused a momentary hope in the journalistic breast. Here was a car after all, but the hope died almost in its birth as the noise and racket increased, and the headlight grew brighter, and instead of the expected car the big electric sweeper came into the full blaze of the arc street lights.

Road Superintendent McDonald, one of the most courteous and hard-working officials of the company, was in charge of the sweeper and the gang of men on the machine. They were hard at work cleaning the track and getting everything in readiness for the resumption of the delayed traffic on the morrow.

"Waiting for a car?" sang out the superintendent as he recognized the reporter. "How would you like to ride on the sweeper. We are going up your way, and we'll have you home in no time."

Perhaps the invitation was kindly intended. Perhaps viewed in the light of subsequent events it was given with malice aforethought against the whole newspaper kind. Be that as it may the thankfulness at any chance of escape from the long tramp in the blizzard, the loneliness and darkness, disarmed the newspaper man of all suspicion. Besides, it was a splendid opportunity to write up a novel experience. Reportorial instinct, duty to the paper, all pointed in the one direction. The invitation was accepted. The next moment the reporter had climbed on to the front platform along side the motorman, with beautiful faith in a speedy home-going, and the sweeper was once more under weigh.



A slightly later sweeper is this one, photographed about 1900. It is second number 6 built by the MSR in 1898 to replace the original number 6 burned in the Hochelaga fire. This sweeper is identical to, and may even be, the one shown working on Cote des Neiges on page 17.

That was at 1.50 a.m.; at 6.20 a.m., or nearly five hours later, the reporter left the sweeper and its crew stuck in a hole at the far side of the exhibition grounds and started to secure assistance, which obtained, he tramped home in the cold and darkness and loneliness, and reached there frozen to the marrow just in time for breakfast.

Whether the reporter was a Jonah or not is unknown. Whether the crew of the sweeper were in league to make their guest have a night of it, is also in doubt, but the fact remains that mishaps were not long in coming, for at the very outset the machine on turning up Bleury street jumped the track and showed a decided inclination to go through the big new building at the corner.

"That's nothing", said the superintendent; but as the trolley kept the wire the wheels went round and round, and this, combined with the jerking and jolting and pyrotechnic display of blue blazes from both wheels and trolley wire, made the reporter's hair stand erect on his head in very horror at the impending electric death that was all around him.

Ten minutes perhaps passed, and with the aid of a ground wire, lots of blazes, and what the officials called "iron shoes", the machine was once more on the rails and bound up Bleury street at a rapid pace, the brooms revolving with a rattling roar, that to the novice at such work was maddening.

The jolting and lurching was simply awful, making one's bones rattle in their sockets, while the sleet and snow driven by the fierce wind cut into the face with the stinging sharpness of a thousand needles.

Did you ever envy the life of a street car driver or motorman? If you have never do so again, for judging from that one night's experience, cracking stones at so much a bushel or shoveling coal in the bunkers of an ocean liner is luxury compared to one winter's night in the life of one of these street car officials.

A RAPID FLIGHT DOWN HILL

Ontario street was reached in good time, but the ascent of the hill to Sherbrooke street was a matter of difficulty. As the machine struggled up to the brow of the hill the wheels lost their grip on the icy rails, and we began a retrograde movement. "Breakes!" called the superintendent; but, alas, the breakes were out of order, and then we went straight to St. Catherine street with the rapidity of thought.

Talk about the rapid flight of the toboggan; it can no more compare with the speed of that sweeper, when it makes up its mind to be down hill than can the flight of an eagle be compared to the crawl of a snail. There is only one way to describe it. You are there, then you are somewhere else, and when you come to go over the ground again you find to your surprise that there is the

matter of a mile or so between there and somewhere else.

The reporter had scarcely regained his breath after his drop into space, to protest against a continuance of the journey, when the machine was once more under weigh up the hill. This time the climb was attended with more success, and Sherbrooke street was finally reached, thanks to a lavish use of sand.

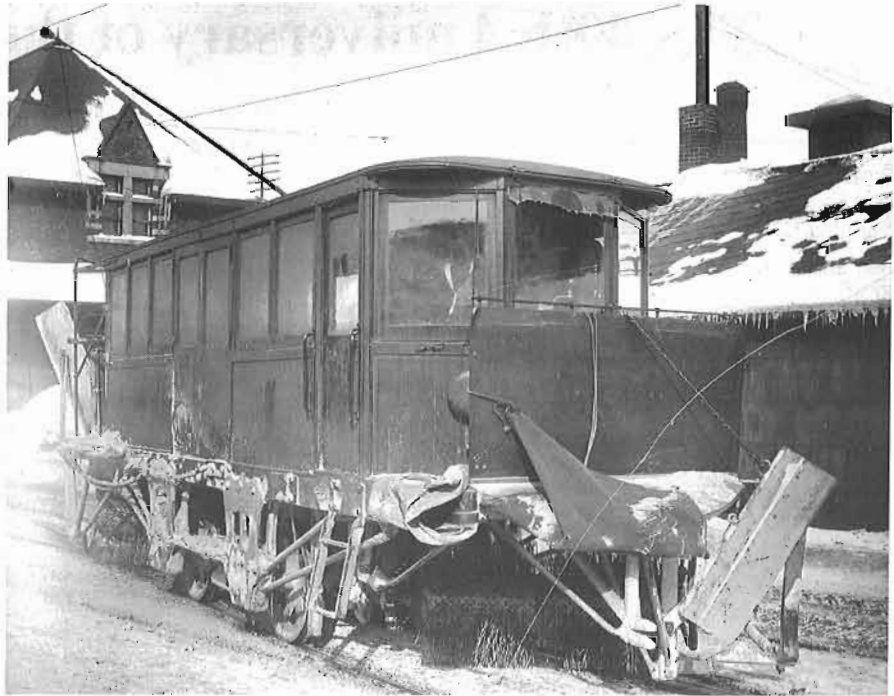
There, however, new trouble awaited. Between Sherbrooke street and Pine avenue, there were two tracks to clear, and on each the snow and ice were packed solid. On this the brushes were of no avail; and the difficulty had to be overcome by systematic butting. The machine would be run back a few hundred yards; one of the crew would get off with a ground wire, the ice would be scraped from the track until a good contact was obtained, and then hurrah. At full speed the sweeper would be sent against the snow and ice in front. This goat-like process was kept up for an hour or more, at the end of which time the tracks were cleared of ice and snow. It may also be mentioned in a casual way that the track was also cleared of the sweeper, for that erratic machine was once more ditched; but what was more disastrous, this time it was derailed with the "broom driving-chain" badly smashed and several links missing. An interesting search for the missing links along the dark road followed, and by the time these were found, the damage repaired and the machine once more on the rails, the morning was very young indeed.

By this time the reporter had become hardened to the vagaries of the sweeper and had given up protesting against its pleasantries and peculiarities. He was a long way from home and had determined to stay right with the machine, and see it out if it took a year to do so.

"DITCHED AT LAST"

The machine now made a new start. Up the inclined approach to Fletcher's field she went in great style. Up and along by that dangerous spot at the quarries, the terror of motor men, down and along the incline to the Exhibition grounds with an ever increasing speed. Around the corner on to Mount Royal avenue with a clatter and bang, that but for the hand rail would have thrown the half perished scribe from his feet, and then a rod or so further came the climax. Another run off. This time into a three foot ditch filled with ice and snow.

The superintendent smiled. He was a living representative of the late lamented Mark Tapley, happy as a bird under any and all circumstances.



Similar to the sweeper opposite, second number 2 was built by Brill in 1898. Both of these were scrapped in 1929, but some lasted until 1950.

All photos with this article are from CRHA Archives, Binns Collection.

The reporter did not smile. He looked at the superintendent, and if looks could kill, there would have been a vacancy in the staff of the Montreal Street Railway Co.

Electric power was now powerless to get the machine out of the hole into which she had fallen. Stormy though the night was the superintendent took off his coat; so did some of the others, and then the reporter was given a practical lesson in the uselessness of jack screws under certain circumstances.

The remainder of the night was spent in a never ceasing, although fruitless, effort to get that sweeper out of that hole. Towards daylight one of the regular motor cars came around from Park avenue, but was also unable to extricate the machine. At 10 minutes after 6 o'clock the reporter offered to go for help. The offer was gratefully accepted. He dragged his benumbed feet as far as St. Lawrence street and there boarded a horse car. After his fingers thawed out he scribbled a note for the conductor to take to the car shops at Hochelaga. In the note he asked for fifty or more "jacks", and a thousand men or so, and as many horses as could be spared. He had an idea that all the help obtainable would be needed to rescue that confounded sweeper.

Then the reporter tramped home to breakfast and to bed.

Now, in the days when it snows and blows, if he sees that sweeper come along the streets he turns his head another way. He no longer envies the motor man or street car driver, and he no longer wants another drive on an electric sweeper.

The 40th Anniversary of the CN Symbol

Forty years ago Canadian National Railways unveiled its new corporate insignia in the form of a stylized "CN" in a flowing script form. Gone was the old maple leaf insignia and the wafer, which dated back to the Grand Trunk days. Within a short time the new symbol appeared on buildings, rolling stock, letterhead, and countless items relating to CN. Eventually it became recognized the world over and continues to be so today. When one thinks that forty years is almost half the time that CN has been in existence, one can appreciate the true significance of this famous symbol. As a tribute to this anniversary we reprint two articles that were recently published, one of which tells how it has been chosen as one of the fifty greatest corporate logos of all time.



This 1967 photo shows the "new look" of CN passenger trains as introduced in 1961. The entire train is in the black and white paint scheme, replacing the "green and gold of yesteryear", and the CN logo is proudly displayed on the front of the locomotive. CN photo No. 67623.

CN logo chosen as one of top 50 corporate logos of all time - worldwide

MONTREAL, Oct. 30, 2000 - A prestigious international panel of leaders in design and business has chosen CN's logo as one of the top 50 corporate logos of all time - the only Canadian company to make the list.

The judging panel, made up of architects, industrial and graphic designers and business leaders, chose the 50 global winners for a competition jointly sponsored by the Financial Times and Report on Business (ROB) magazine. The results were published in the Financial Times magazine, The Business, in the United Kingdom on October 21 and October 28, and in ROB Magazin in Canada on October 27.

When it was created in 1960, the logo was considered bold and audacious, and as the judges remarked, the trademark still looks modern 40 years after its creation. Industrial designer Jasper Morrison called CN's logo "a perfect blend of symbol, typography and intent".

The logo was Canada's sole winner and was voted number 38 in the world. In order to make the Top 50, the logo had to look great, accurately reflect the company's activities and aspirations, and have a positive effect on perceptions of the company among the public and employees.

"CN is proud of this international recognition and of the enduring CN symbol, as innovative today as it was 40 years ago. It continues to depict a strong, bold, forward-thinking company," said Paul Tellier, Canadian National President and Chief Executive Officer.

Prominent Canadians have long recognized the logo's impact. Shortly after it was created, the logo won numerous design awards, and media guru Marshall McLuhan termed it "an icon". Chris Staples, creative director of Vancouver's Rethink Advertising, calls the symbol "...still one of our most enduring marketing icons". According to a poll conducted in 1999 by Angus Reid (now Ipsos-Reid), 99 per cent of Canadians recognize the logo and associate it with CN.

Designed to last

In 1960, Allan Fleming, the young and highly regarded Canadian who designed the CN trademark, made a prophetic pronouncement on its lifespan. "I think that this symbol will last for 50 years at least. I don't think it will need any revision, simply because it is designed with the future in mind."

After months of experimenting with various possibilities, Fleming was struck with inspiration while travelling on an airplane bound for New York. He quickly sketched the idea on a cocktail napkin and CN's logo was born.

Fleming said his vision was to use a continuous flowing line to symbolize "the movement of people, materials and messages from one point to another". As the eye moves from "C" to "N", the image suggests fluidity and motion. He also said: "It's a route line that incidentally spells CN".

A new look for a new company

The logo was commissioned after CN had invested close to \$2 billion during the 1950s in the modernization of equipment, computerization, facility upgrades, and new management and financial structures. The logo was at the heart of a broader overhaul of CN's visual image - from locomotive paint schemes and building exteriors right down to the sugar packets used in its hotels.

CN's public relations department believed that the company's visual identity had to communicate the reality of the new CN, recalls Lorne Perry, since retired from CN, who implemented the corporate identity program. "At that time, we believed that if CN had a fresh new trademark, people would be more likely to think of it as the technologically advanced, customer-friendly railway it was rapidly becoming".



In addition to its basic logo, CN created symbols for each of its major subsidiaries; Grand Trunk (U.S.A.), Central Vermont and Duluth Winnipeg & Pacific. Later, when the Canada & Gulf Terminal was bought by CN it too received a new logo in the same style. All but the DW&P had the same flowing structure as that of the parent company. In the photo above we see four of the five (all but the GT) in one train at Matane Que. on December 18, 1999. Below is a closeup view, taken the same day, showing the very rare logo of the C>.

Both photos by Fred Angus



The old



The new



Perry says that the flowing signature logo was a departure from the railway heralds of tradition, and was perceived as a risk-taking venture at the time. "There was a lot of controversy about this bold new look and the 'CN red', but ultimately the company moved forward with this design because of all the strong features. For the first time, the logo was bilingual and a powerful moving billboard for CN's powerful trains".

Canadian National Railway Company spans Canada and mid-America, from the Atlantic and Pacific oceans to the Gulf of Mexico, serving the ports of Vancouver, Prince Rupert, Montreal, Halifax, New Orleans, and Mobile, Ala., and key cities of Toronto, Buffalo, Chicago, Detroit, Memphis, St. Louis, and Jackson, Miss., with connections to all points in North America. It owns the Illinois Central in the United States and has recently announced its intention to purchase the Wisconsin Central, which will include the Algoma Central.

How CN's logo came to be

It was 1959 and CN could look back on a decade of immense progress. The company had invested some \$2 billion in new equipment, new services, and new ways of running the railroad. CN had changed with the times, and its managers assumed that people knew all about it. They were shocked when a public attitudes survey revealed that most Canadians considered CN old-fashioned, slow to innovate, even backward.

Clearly, much of the progress had taken place behind the scenes, away from the public eye. The challenge was to bring CN's visible image in line with its new reality.

Within months, the company launched a massive visual redesign program. CN's entire look would change, from trains and building exteriors to staff uniforms and sugar packets. A new logo would be the key element from which everything else would flow.

CN's existing trademark, a lettered "wafer" superimposed on a maple leaf, had served CN well since 1943 - in fact the wafer itself, without the maple leaf, dated back all the way to 1896. However, it had fallen out of tune with the times - and with the new CN.

The new logo had to meet several objectives. It had to be recognizable and memorable, regardless of size or application. It had to be timeless, projecting an up-to-date, forward-looking image well into the future. It had to suggest movement, reflecting CN's primary business, and it had to convey a sense of CN as a dynamic, innovative industry leader.

CN insisted that the logo be adaptable to the company's non-railroad businesses, such as hotels and telecommunications. It also had to be bilingual. Thus the "R" for "Railways" in "CNR" would have to go. Not only did it apply just to the railway, but it did not work for the French term chemin de fer. Designer Allan Fleming's flowing "CN" met the mark in every respect. Bold, legible from a

distance even when in motion, it symbolized "the movement of people, materials and messages". Fleming said, "a route line that incidentally spells CN". The logo would last for at least 50 years, he predicted, because "its very simplicity guarantees its durability".

Allan R. Fleming Creator of CN's logo

Allan Fleming was barely 30 when he was recruited to come up with a fresh new logo for CN. Yet the young Canadian designer had already made a name for himself with the bold, lyrical quality of his graphic designs.

Born in Toronto in 1929, Fleming followed a rather unorthodox route to professional excellence. He left art studies at Toronto's Western Technical School at 16 to work as a kind of apprentice designer at various firms in the city. Then came further learning experiences in England, where he gleaned as much as he could from leading figures in the design world. Back in Canada, he joined the typographic firm Cooper and Beatty Ltd. in 1957 and was working there when the CN opportunity came his way in 1959.

Fleming left Cooper and Beatty in 1962 to become art director for Maclean's magazine. He was vice-president and director of creative services at Maclaren Advertising from 1963 to 1968, chief designer at the University of Toronto Press until 1976, then joined Burns and Cooper.

Fleming's work won him numerous awards throughout his career, not only in Canada but in the United States and at the international level. Yet he is no doubt best remembered as the creator of CN's logo. The inspired design certainly entrenched his reputation as one of Canada's most talented designers. At the same time, it heightened the profile of his profession, opening the way to greater creativity in countless design applications across the country.

Allan Fleming died after a long illness on December 31, 1977, at the early age of just 48.

ExpoRail Project, January 17, 2001

Project Report - by Charles De Jean

Since my first report of December 13, 2000 the past 35 days have seen a lot of work done by our contractor L.A. Hebert on our Exporail expansion project.

Construction was started on December 18 with the arrival of the contractor's equipment to prepare our new service access road to the site. This will enable truck & service access to the new building without conflicting with visitor movement, in addition to providing a heavy truck route to the construction site that does not require using one of our bridges over the St. Pierre River.

Due to the fact that there is a ditch that runs diagonally across the new building site, the priority for the contractor has been to create a new creek bed to divert the flow of the

Depuis notre dernier rapport, le 13 décembre 2000, l'entrepreneur L.A. Herbert a accompli plusieurs travaux en 35 jours pour notre projet Exporail.

Mentionnons tout d'abord, l'arrivée de l'équipement de l'entrepreneur, le 18 décembre, pour ouvrir une nouvelle route d'accès au site. Cette route permet aux camions d'accéder au chantier sans déranger les visiteurs et sans avoir à utiliser les ponts qui enjambent la rivière Saint-Pierre.

L.A. Hébert a dû créer une voie de détournement d'eau puisque le fossé existant traverse diagonalement le site du nouveau pavillon. C'est pourquoi, une section de canalisation de 4 pieds a dû être installée sous les rails de l'entrée arrière du nouveau bâtiment, et ce sur une longueur de 150 pieds. De plus, pour répondre aux demandes du ministère de l'Environnement et ainsi obtenir notre permis

existing ditch. A 150' section of 4' concrete pipe has been placed under the area to become the railway yard access to the new building. Two flood plain basins have almost been completed in order to replace a similar basin that exists on the site. This is one of the requirements specified by the provincial environment in order for the CRM to get a construction permit.

Work is also proceeding with the preparation of the actual construction site: All the brush has been mulched.

All trees in the construction zone for the new building have been removed.

All the stumps have been removed.

The over burden of snow is removed on an as required basis. Removal of poor quality earth and fill is under way.

Three drainage creeks have been piped for easier construction vehicle access.

All CRHA and CRM material & artifacts stored on the new construction zone of the property have been moved to a new location,

Although various contractors will carry out a bulk of the project the contribution by the volunteers continues to play a major cost saving roll. Listed below are some of the projects complete by our volunteers:

Movement of stored artifacts and materials from the construction zone, including signals, exhibit walkways, concrete footings for signals, wood poles, fence posts, fiber glass caboose moldings, stored wood, a coal pile, diesel engine block components, 90% of the trees some as old as 90 years with 2 1/2' diameter trunks were cut down, cut to moveable lengths and piled for reuse as potential lumber source or to be burned as fuel for the John Molson.

Considerable administrative work is also carried out by the volunteers in the following areas: National, Regional and Internal fund raising committees, Construction committee, Financial control committee and Museum Administration committee.

It must be pointed out that the Association and the Staff of The Canadian Railway Museum have been extremely successful to date in getting funding, attending meetings to produce the plans, themes goals & objectives, with the Exporail project over the past 15 years but it is the contribution of the team made up of volunteers and professionals with in our organization which has make this project a reality. We continue to need this participation.

Thanks for the help!

Charles De Jean
Project Manager



Levelling ground for the new display building. View is from the back to the front of the future building.

de construction, deux nouveaux bassins de rétention ont été creusés en remplacement de celui déjà existant.

Le travail de préparation du terrain se continue évidemment sur le site. Ainsi donc:

Toutes les broussailles ont été coupées et déchiquetées.

Tous les arbres, sur le site du nouveau pavillon, ont été coupés.

Tous les troncs ont été enlevés.

La neige est enlevée régulièrement.

La terre de remplissage et de mauvaise qualité a été enlevée.

Une nouvelle canalisation a été faite sur trois ruisseaux de déversement pour faciliter l'accès aux véhicules.

Tout le matériel appartenant à l'ACHF et au MFC a été déplacé sur un nouveau site.

Mentionnons aussi la contribution des nombreux bénévoles qui nous permettent de sauver temps et argent:

beaucoup de matériel et plusieurs artefacts ont été déplacés de la zone de construction, tels que des signaux, des dalles de béton, des piles de bois, du charbon, des piquets de clôture, des pièces de moteur diesel. Ajoutons que tous les arbres coupés serviront de carburant pour la John Molson.

les charges administratives des comités suivants: Comité de développement du Musée, Comité de gestion du Musée, Comités national, régional et interne de levée de fonds, le Comité de construction (gestion du projet).

Enfin, nous ne pouvons pas passer sous silence la contribution du personnel du Musée et de l'Association. Que ce soit pour toutes les réunions de planification et de développement d'Exporail depuis 15 ans, pour les levées de fond ou pour toutes autres activités reliées au projet, le travail de cette équipe de bénévoles et de professionnels se doit d'être souligner. Grâce à eux, le projet Exporail est maintenant réalité.

Merci à tous!

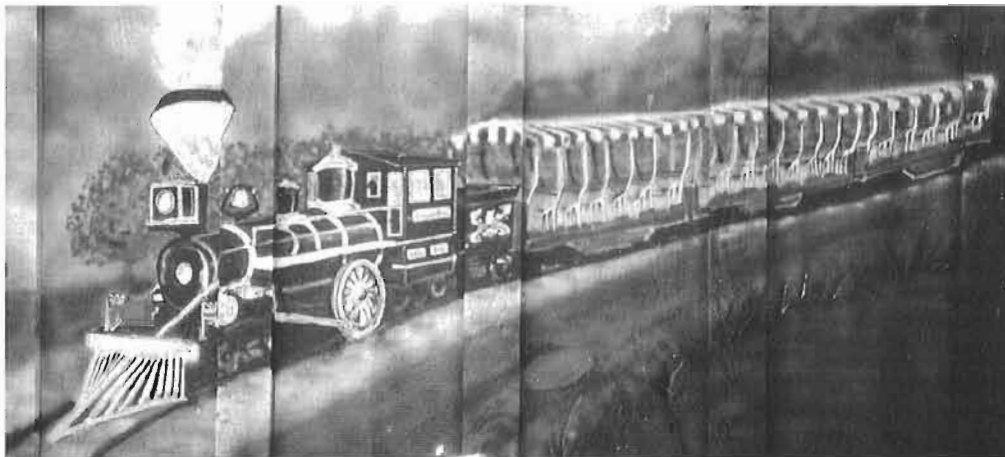
Charles De Jean
Chargé de projet.

A Few More Murals

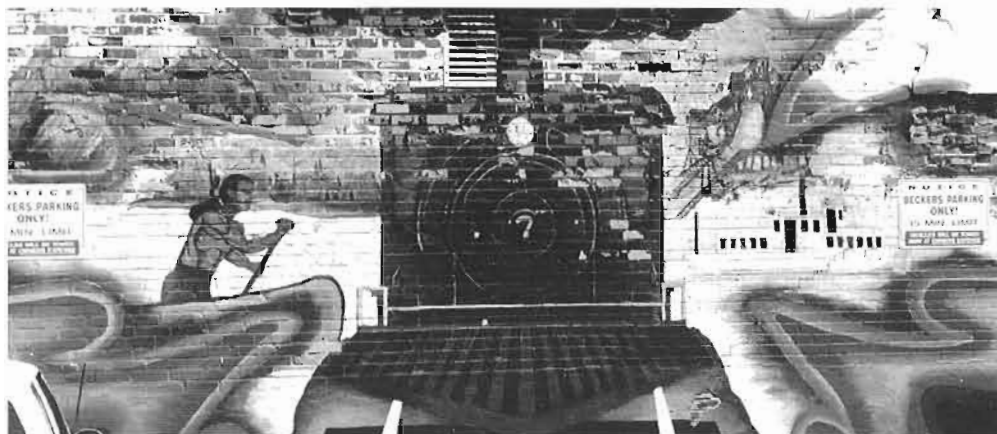
Continuing our series, here are a few more murals with railway subjects. We still have some more which we hope will appear soon, and we hope that members will send in others so we can keep the series going.



This beautiful mural shows both the old and new St. Clair tunnel, together with a portrait of Joseph Hobson, the designer of the old one. Unfortunately the submitter did not say where the mural is. It is likely in the Sarnia area, but does anyone know?

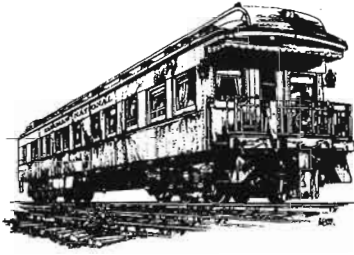


This charming painting is at Puddicombe Farms near Stoney Creek, Ontario and was photographed on August 2, 1999. The farm, which was established in 1797, offers rides on a narrow gauge tourist railway.

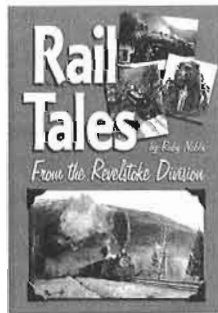


This mural is at Huntsville, Ontario. It is shown as it was on July 30, 1999. It is in very poor condition and, if not restored soon, is likely to disappear.

The Business Car



RAIL TALES FROM THE REVELSTOKE DIVISION



This new book by Ruby Nobbs is a compilation of 47 stories relating to the CPR Revelstoke Division in British Columbia. In 96 pages, with many illustrations, this book covers the history of this division, in roughly chronological order, from the Palliser expedition of the 1850s to the opening of the Revelstoke Railway Museum in the 1990s. The stories cover a very wide variety of subjects from incidents during the construction of the line to stories of the great passenger trains that used to pass by. Many of the stories concern disasters like train wrecks, avalanches, boiler explosions and collapses. This is understandable considering the mountainous country through which the railway passes. In the early days we learn of such events as the revolt at Beavermouth in 1885, and more recently it covers the Last Spike centennial in 1985, the last run of the "real" *Canadian*, the establishment of the Revelstoke Railway Museum, and the arrival of locomotive 5468 shipped from Delson.

Rail Tales from the Revelstoke Division is available from Box 410, Revelstoke B.C. V0E 2S0. The price is not given, but may be determined from the Museum. The email address of the Revelstoke Railway Museum is railway@revelstoke.net. This is a fascinating book and should be in the library of everyone who is interested in the history of the CPR or of British Columbia.

CINERAIL SETTLES IN LILLE

Cinerail, the international railway film festival, has continued to develop and increase its standing with each new venue. It is now moving to Lille in France, a truly European town located in the heart of the European railways

between France, the Benelux, Britain and Germany. The 10th Cinerail festival will take place during the first fortnight in December 2001. The countdown has already started and all the stops will be pulled out to ensure the success of the only international festival in the world devoted to the railways and film.

LINDSAY & DISTRICT MODEL ENGINEERS SHOW

The annual show sponsored by the Lindsay & District Model Engineers will take place on Saturday and Sunday April 7 and 8, 2001 at the Victoria Park Armoury, 210 Kent Street West, Lindsay, Ontario. On Saturday the hours will be 11:00 A.M. to 5:00 P.M., while on Sunday they will be 10:00 A.M. to 4:30 P.M. Admission is \$4 for adults, \$2 for seniors and students, and \$1 for children. More information may be had from Box 452, Lindsay, Ontario K9V 4S5 or from Wayne Lamb at (705) 324-5316 or Eric Potter at (705) 328-3749.

INFORMATION WANTED

The Nanaimo District Museum is restoring the locomotive Wellington, and is looking for information in the form of photos, movies and other information. From 1889 to 1952 the Wellington, originally named the Victoria, worked in Wellington, Union Bay and Cumberland collieries on Vancouver Island. It is hoped to restore the locomotive to its 1952 appearance. The address of the Nanaimo District Museum is 100 Cameron Road., Nanaimo B.C. V9R 2X1, and the telephone number is (250) 722-2928.

CANADIAN PACIFIC LIMITED TO SPLIT UP

As we go to press word has just been received of the largest reorganization of Canadian Pacific in its 120 year history. If it receives the necessary approval, Canadian Pacific Limited will cease to be a conglomerate and will be split into five publically traded companies. One of these will be the Canadian Pacific Railway Company which will concentrate entirely on running the railway, the purpose for which the company was founded in 1881.

CORRECTIONS

In our chronology last issue, under date 1937, we somehow confused the "Northland" train with the "Northlander". It is the "Northlander" that is still running. Also, under date 1908, the name of Sir Robert Reid was erroneously spelled "Reed". The editor regrets these errors.

CHRONOLOGY OF THE TWENTIETH CENTURY

The continuation of the chronology of the twentieth century, begun (1901-1960) in the last issue of Canadian Rail was not completed in time for the deadline for this issue. The editor hopes that this portion, covering the years 1961 to 2000, will appear in the next issue.

BACK COVER: The Cote des Neiges street car line was one of the most interesting of the Montreal system, going up the hill between the two mountains. Its last full day of operation was June 25 1955, and on that day the CRHA chartered car 1981 for a farewell trip. This photo shows 1981 coming up the private right of way near the summit of the line.

Photo by Fred Angus

Canadian Rail

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