

Canadian Rail



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CANADIAN RAIL

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EDITOR: Fred F. Angus
CO-EDITOR: M. Peter Murphy
BUSINESS CAR: Dave J. Scott
OFFICIAL CARTOGRAPHER: William A.
Germaniuk
LAYOUT: Michel Paulet

CALGARY & SOUTH WESTERN DIVISION
60-6100 4th Ave. NE
Calgary, Alberta T2A 5Z8

OTTAWA
BYTOWN RAILWAY SOCIETY
P.O. Box 141, Station A
Ottawa, Ontario K1N 8V1

NEW BRUNSWICK DIVISION
P.O. Box 1162
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FRONT COVER:
MONTREAL TRAMWAYS CO. CAR 1496
passing under the underpass in
Mount Royal park near the start
of its climb to Mountain Loop.
Photo by E.A. Toohy in 1950.

OPPOSITE:

ALL ABOARD - EN VOITURE!! The
inspector has given his clear-
ance, and No. 1466 is about to
start its climb to the loop
atop Mount Royal. The passengers
on board will soon experience a
few minutes of real mountain
railroading. It is May 1956,
but still early in the season.
Accordingly, cars run only on
weekends, and one car is
sufficient. By mid-summer it
will be a different story when
as many as ten cars will be
required on busy days.
Photo by Fred Angus.

PACIFIC COAST DIVISION
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CAR 1337, BUILT BY OTTAWA CAR CO. IN 1913 rounding a sharp curve through a rock cut.
Toohey Collection.

MOUNTAIN- MONTAGNE 1930 to 1980

The City of Montreal once had a street car line which was unique to Canada and rare anywhere in the world; a full-fledged mountain electric railway in the heart of the city. For twenty-seven years, from 1930 to 1957, this line operated, carrying more than six million passengers to and from the park on the heights of Mount Royal.

Sad to relate, this line fell victim to the march of "progress" as street car lines disappeared in the 1950's, and the automobile extended its domain up the slopes of Mount Royal, a place formerly reserved for pedestrians, horse-drawn vehicles, - and electric cars. As a result, what might today have been a tourist attraction as noted as San Francisco's cable cars was swept away in the Autumn of 1957, and in its place we have a motor highway. While this highway is most scenic it lacks the charm and character of the old No. 11 tramway line.

The year 1980 marks the fiftieth anniversary of the opening of this route, and we have been fortunate to receive two excellent articles on this subject. One by Mr. Richard Binns, for many years an official of the Montreal Tramways Co. and Montreal Transportation Commission, tells the story as seen by the Tramways Company. The other article is by Mr. Jim Telfer whose father was manager of Cooke Construction during the building of the line. Mr. Telfer himself was present, at the age of twelve, during the construction of the Mountain line, and took the photos accompanying the article; thus his story, aided by his father's notes, is told first hand.

In view of this, we present an issue of Canadian Rail devoted entirely to the street car line over Mount Royal including the line from Cote Des Neiges Road up Remembrance. A collection of photos from the C.R.H.A. archives will bring back memories of 1325-class trams climbing the 10% grades, and descending amid the whine of dynamic brakes. For those who never rode the line this will serve to show what they missed.

The building of a street car line up the slopes of Mount Royal was a considerable feat of engineering, but it was completed, and made it possible, for an all-too-brief time of twenty-seven years, to enjoy, for the price of one street car ticket, some true mountain railroading in the heart of the largest city in Canada. The editorial committee of Canadian Rail hope you will enjoy this special issue, and have a pleasant ride, in imagination, up Mount Royal on the "MOUNTAIN - MONTAGNE" route Number 11.

STREET CARS UP MOUNT ROYAL

BY RICHARD M. BINNS

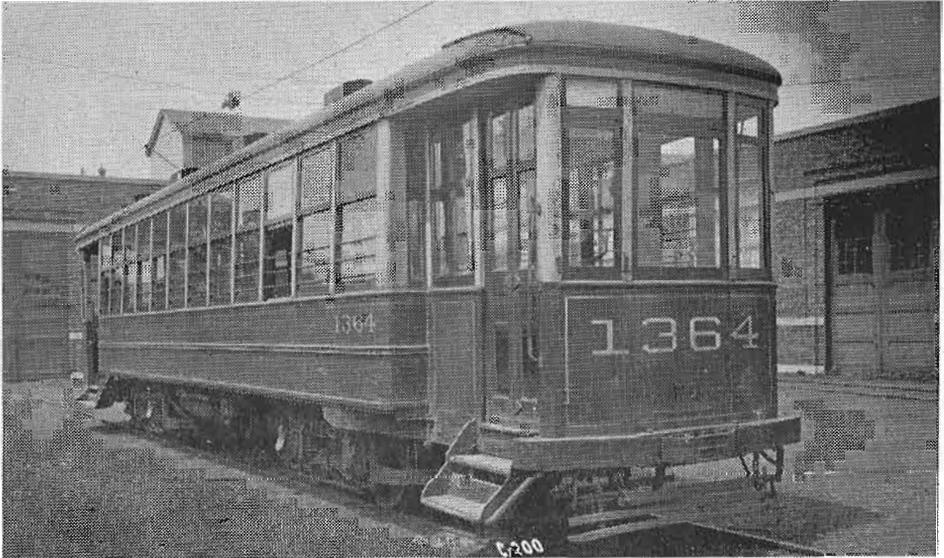
On July 10, 1930 - fifty years ago - Montreal Tramways Company commenced operation of its "MOUNTAIN" line in Mount Royal Park. In keeping with the current fashion of marking anniversaries of all kinds - a sure sign of cultural maturity - we might take this opportunity to look back briefly at this unusual streetcar line.

While it is not uncommon to find large parks and recreational areas in the centers of cities, few indeed can boast of a mountain as well. Of course anyone from the far west may well scoff at using the word "mountain" for this historic wooded prominence. But, to generations of Montrealers it is indeed "The Mountain" - cherished as a place for quiet relaxation, seemingly far removed from the cares of a work-a-day world. From this leafy retreat one looks down on the city with refreshing detachment.

Each summer for over thirty years, commencing in 1885 the Mountain Park Railway Company's cable incline railway carried many thousands of citizens between Park Ave. and a mountain-top pavilion, -with an unblemished safety record, it should be added. For persons of little means it was an ideal place for pic-nics and outings for the large families of those days, especially in hot weather. During World War I the incline ran into financial difficulties and in 1918 did not seek renewal of its franchise from the City of Montreal. Shortly thereafter the structures and machinery were dismantled. Commendably the City continued to ban motor vehicles from the park roads, but without the incline railway, the mountain was virtually restricted to the more affluent citizens who could use horses or bicycles, - and, of course, those athletic individuals who tackled the steep paths and formidable flights of steps to reach the top.

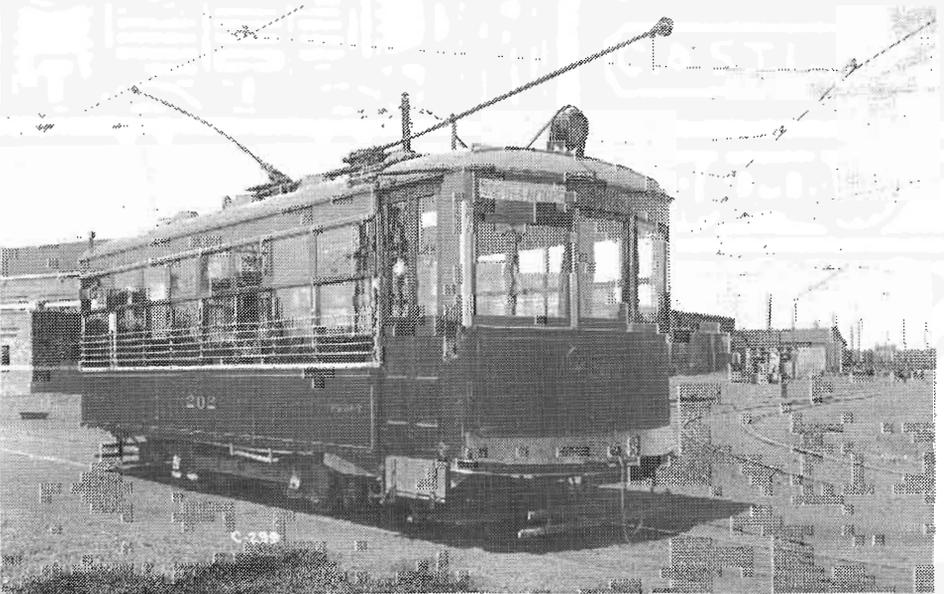
This was the situation then until 1924 when Montreal Tramways Co. entered the picture and built a double track line up Shakespeare Road (later renamed Remembrance Road) from Cote des Neiges Road for a distance of about 3/4 mile. A turning loop was provided at the top. This line offered quite a good access to the mountain from the west, but it did not serve any large population group. In those days there was virtually no population in the Cote des Neiges region between Westmount Blvd. and Queen Mary Rd. Service was provided during summer only, and only in daylight hours. One Birney car was usually sufficient. On fine Sundays and holidays two large double truck cars were usually required.

In the mid-1920s the City of Montreal was most anxious to have a tramway service on the east side of the mountain for the large population located east of Park Ave. Any mention of such a venture around the ire of environmentalists who stoutly opposed any threat to the parks natural beauty. Perhaps inspired by the Shakespeare Road line, which was tucked in close to the cemetery



CAR 1364 AS IT APPEARED ABOUT 1923. This was the type selected for operation on the mountain in 1930, by which time route numbers and wider front doors had been added. The indirect dash lights did not, however, come until the mid-1930's.

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



WHEN THE LINE UP SHAKESPEARE ROAD BEGAN in 1924, service was provided by Birney cars, acquired from Detroit that year. This view, taken at Youville shops about 1925, shows No. 202 lettered for Côte Des Neiges which was then a small shuttle line. The Shakespeare route branched off Côte Des Neiges.

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

Transfers issued between 4 P. M. and 4 A. M. must have this coupon attached

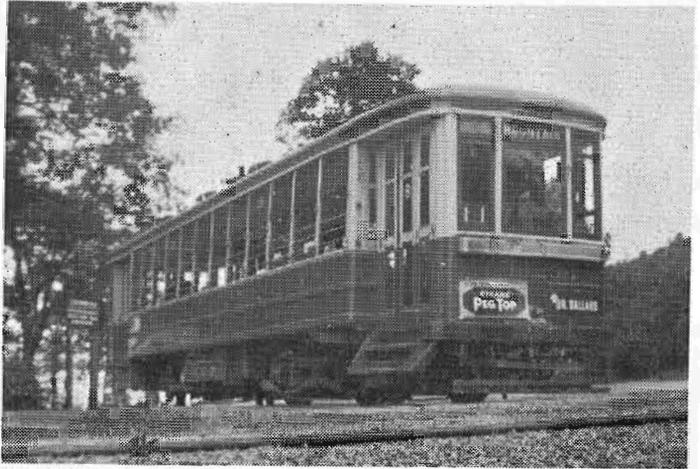
001342

Les correspondances émises entre 4 P. M. et 4 A. M. doivent avoir ce coupon

A TRANSFER ISSUED ON THE MOUNTAIN LINE on July 1 1952 at 5:30 P.M.

MOUNTAIN-MONTAGNE

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
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TRANSFER POINTS de Correspondance		LE TRAMWAY EST PARTI DU TERMINUS A													
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		2	15	30	45										
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		4	15	30	45										
		5	15	r	35										
Summit Loop		6	15	30	45										
		7	15	30	45										
		8	15	30	45										
		9	15	30	45										
Park Avenue		10	15	30	45										
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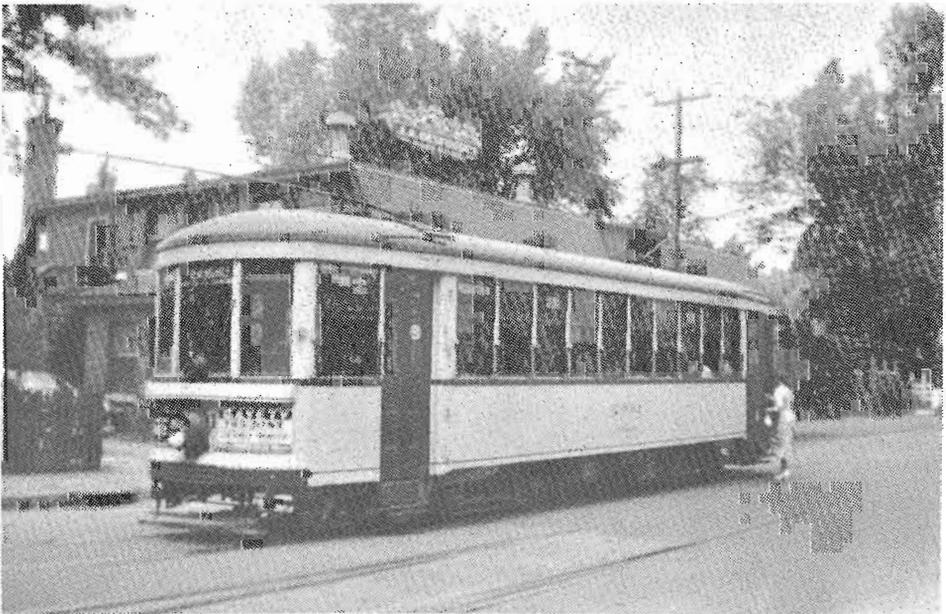


ROUNDING THE MOUNTAIN LOOP, CAR 1325 has just arrived from Park Ave. This car was the first one of the series, and was built in 1913.

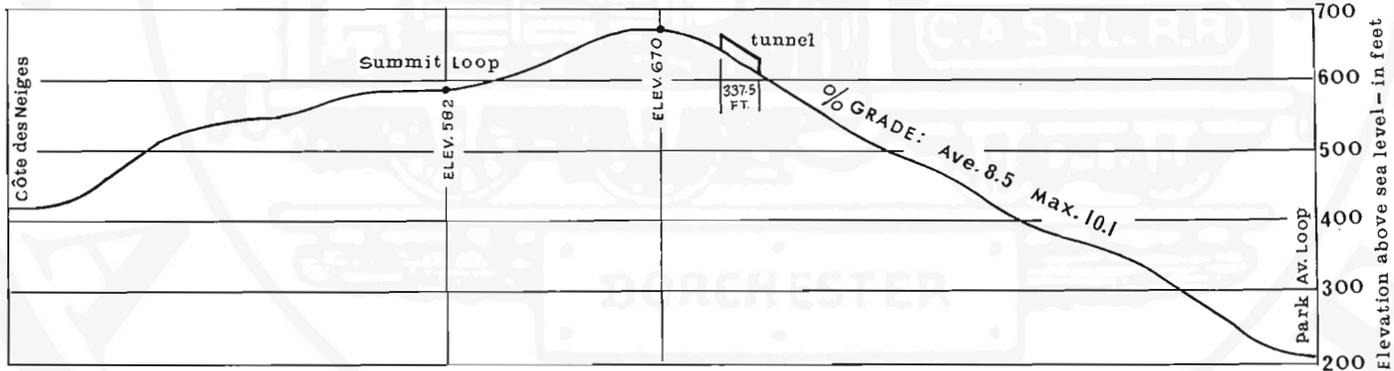
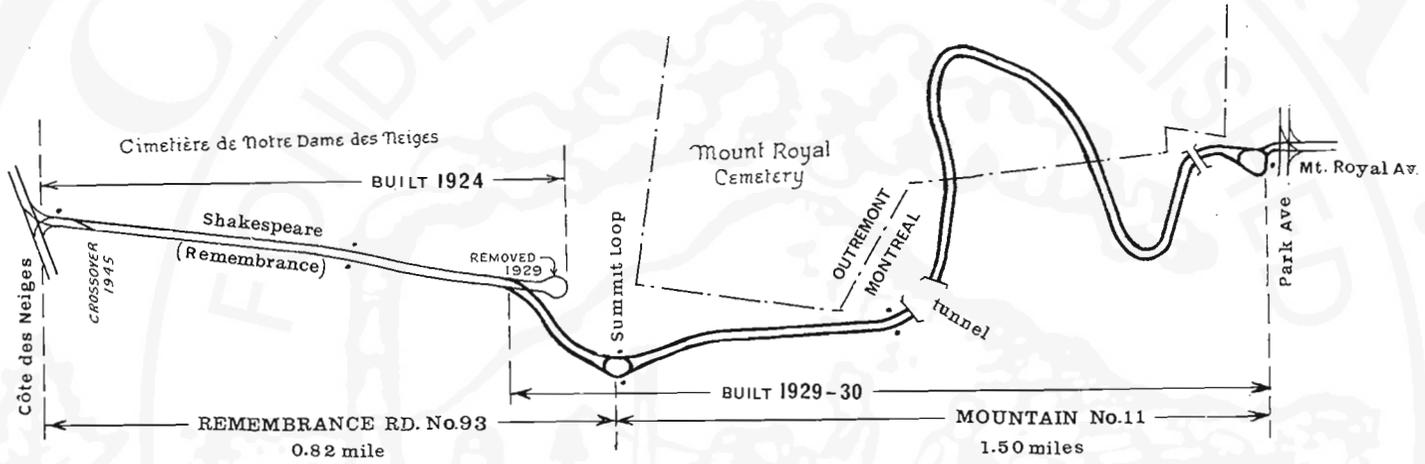
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fence, the City engineers devised a route over the back of the mountain from Park Ave. to a connection with Shakespeare, and located unobtrusively along the northern limits of the park next to the cemeteries. All thoughts of trying to reach the lookout chalet were abandoned. After much discussion between the City of Montreal and M.T.Co., an agreement was reached, despite the Company's misgivings, whereby the City would cut and prepare a right-of-way with suitable grades and curves, all at public expense. The Company, on its part, would build and equip a tramway line on it, and operate a limited service similar to that on Shakespeare Rd. A contract for grading a roadbed, which included heavy rock cutting and a short tunnel, was awarded to Cooke Construction Co. and work commenced in the early Spring of 1928. By mid-August 1929 the roadbed was completed and tracklaying started on October 7. Progress was suspended for the winter, double track had been laid from the Shakespeare connection to a point well down the east slope below the tunnel. The Summit Loop was also installed. This was to be the terminal point, roughly on half mile from the Chalet. Work on the Park Ave. loop and connection to the existing tracks on Mount Royal Ave., started in early April 1930. The track was then laid up the mountain to meet the previous years work. The entire line was ready for service in early July 1930 at a cost of \$124,419.12 for track and overhead work on a distance of approximately 1.66 miles.

A word about the track: Every effort was made to assume safe operation. New 85 lb. T rail was used on treated ties in rock ballast. Joints were bolted tight, and slip-rail expansion joints were provided. New 80 lb. guard rail was generously applied to all curves. Special tie plates were used and steel spacer wedges arranged so that the guard rail could be moved progressively closer to the running rail to compensate for wear. In the interests of safety, the running rails were laid to a tight gauge, in order to prevent any lateral play of M.T.C.'s shallow flanged wheels. Unfortunately this caused the cars to "squeek", even on straight track. The only solution was a careful application of grease. Center restraining rails were installed on all curves. Actually the sharpest curve had an easy 163 ft. radius. The whole undertaking was carried out with the speed and efficiency for which the Company's track gangs were noted. The majority of the trackmen on the mountain project were Italian born, or of Italian descent. Some of these men literally lived on the job, sleeping in small tents and cooking their meals in the open. On most fine evenings there would be lively accordion music and singing around a campfire. These were happy people who took pride in their work. Light-hearted banter would cease however, whenever smoke was seen rising from the crematorium in Mount Royal Cemetery, - a somber reminder of man's mortality.



DOUBLE ENDER NO. 2001 waits at the Cote Des Neiges end of the Remembrance (formerly Shakespeare) line about 1948. This car would connect with the No. 11 tram at Mountain loop. Interestingly, car 2001 also was used on the Lachine Extension line which was served from the same barn. This explains the headlight on the car which was not required for service on the mountain.



CANADIAN

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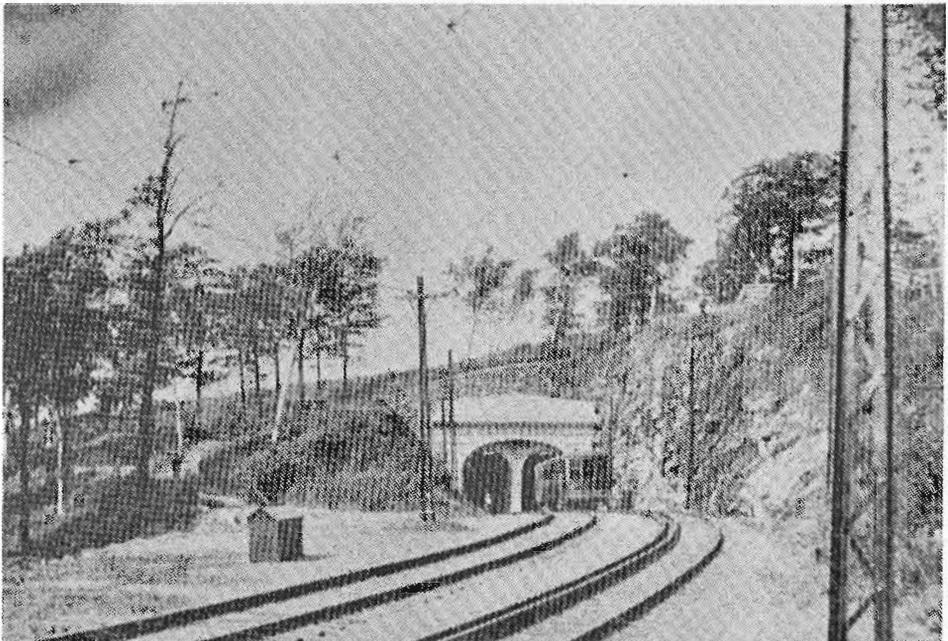
RAIL

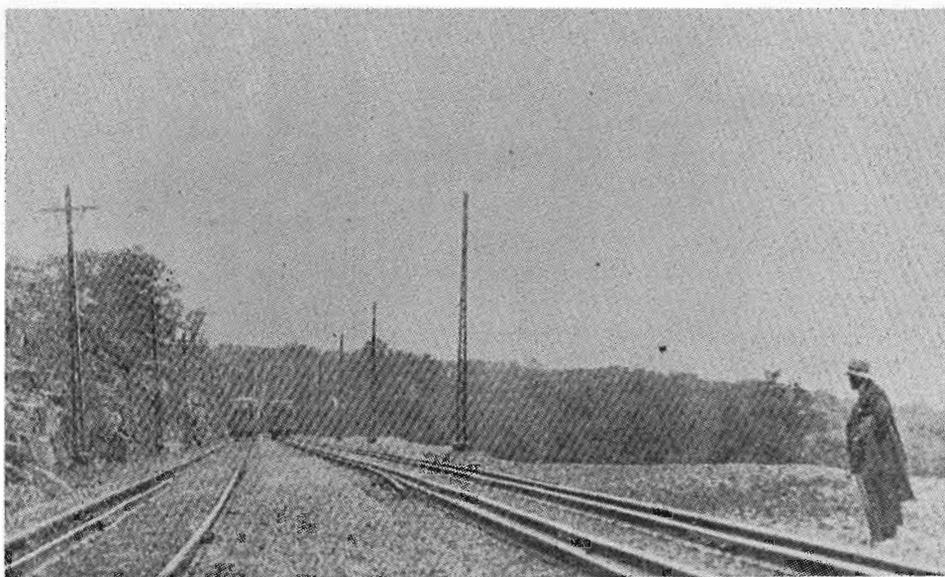
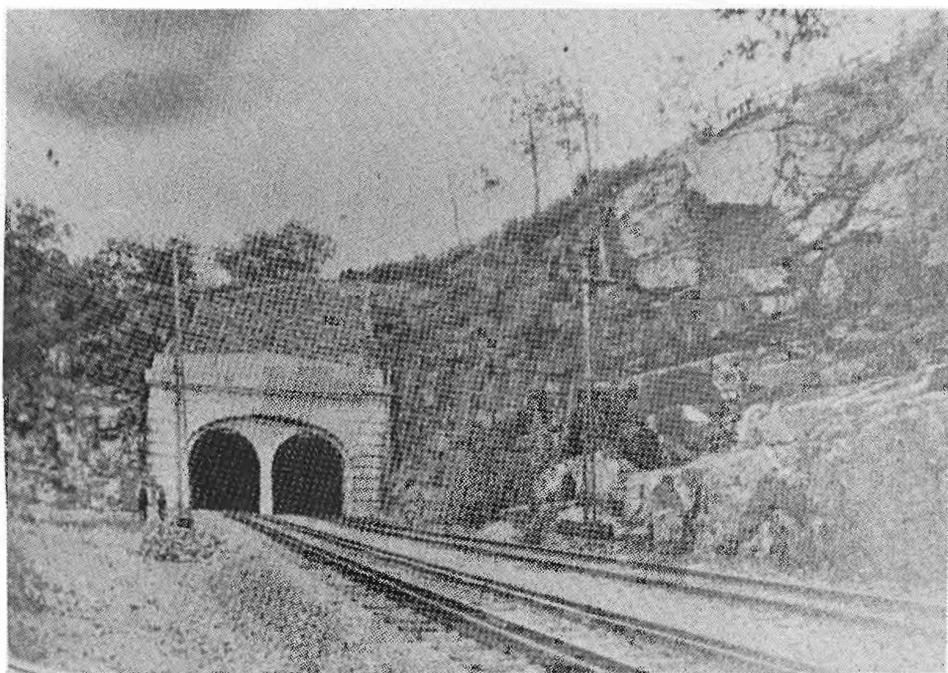
1932

There were no serious accidents during construction of the line, but there were at least two "near ones". A four-wheeled push car got away and gave the two trackmen on it a rather wild ride, but ended up safely on Park Ave. loop. Another incident might have had tragic consequences. A steel dump car (3125 class) loaded with some 60,000 lbs of crushed rock was left unattended on the steepest part, and started to roll. Fortunately an official in the Company's operating department happened to be visiting the work and saw what was happening. He was able to catch the car and bring it under control, - an unsung here indeed. One shudders to contemplate the delivery of thirty tons of crushed rock at high speed somewhere on Park Ave.

Trolley wire suspension was by span wire over both tracks. This was considered better looking than bracket arms on center poles. Consequently the "devil strip" was for the most part, of normal width; 4'9". Lattice type steel poles were used throughout.

Specific rolling stock for the mountain line was chosen from a group of 200 two-man cars built in 1913-14 (1325 class). There was some variation in equipment on 1325 class cars. Those selected for the mountain were required to have Westinghouse No. 533 motors. General Electric K35 control, and Can. Westinghouse air brakes, all of which could be depended upon for good performance. Safe operation being of primary concern, and considering the long 10% grades it was thought wise to provide an auxiliary braking system. Consequently the 20 cars selected were fitted with dynamic brakes as well as new powerful hand brakes. Also the circuit breakers were replaced reclosing line switches under the car. None of these changes prevented the cars from operating in regular city





ON JULY 10 1930, service began on the Mountain tramway line. The roadbed had cost \$287,415, engineering \$92,585, and track construction \$260,000. These three photos were taken at the start of the service, and are the oldest known showing trams running on the line. They first appeared in the Canadian Railway and Marine World in September 1930.

service when not required for the mountain line. When on this line the use of the dynamic brake was mandatory on the steepest portions, but prohibited on other parts of the system. The cars were stationed at Mount Royal Ave. car house, and operated only by specially trained motormen attached to that Division.

Service commenced on July 10, 1930 between Park Ave. loop and Summit loop, designated route no. 75. During the first season, on fine weekends, a longer route was set up; from the intersection of Mt. Royal Ave. and Iberville St. to Summit loop, designated Mount Royal No. 11. This was not successful and subsequently the cars ran only from Park Ave. loop, retaining the number "11", and designated "Mountain-Montagne". The periods of operation were generally the same as Shakespeare No. 93, although there was never any through running. On weekdays one or two cars was usually sufficient, giving a 20 min. or 10 min. service respectively. On fine weekends and holidays, up to ten cars might be required on Route 11. Aside from the terminal loops there was only one passenger stop in each direction this was located just beyond the west portal of the tunnel at the highest point on the line. There were steps at that point leading to higher points on the mountain. On the "down" trips motormen were required to make a safety stop just after emerging from the tunnel, which incidentally afforded the passengers a remarkable panoramic view of the north, and east sections of the city, as well as the St-Lawrence River.

Regular fares were in effect, with free transfer to and from the connecting lines.

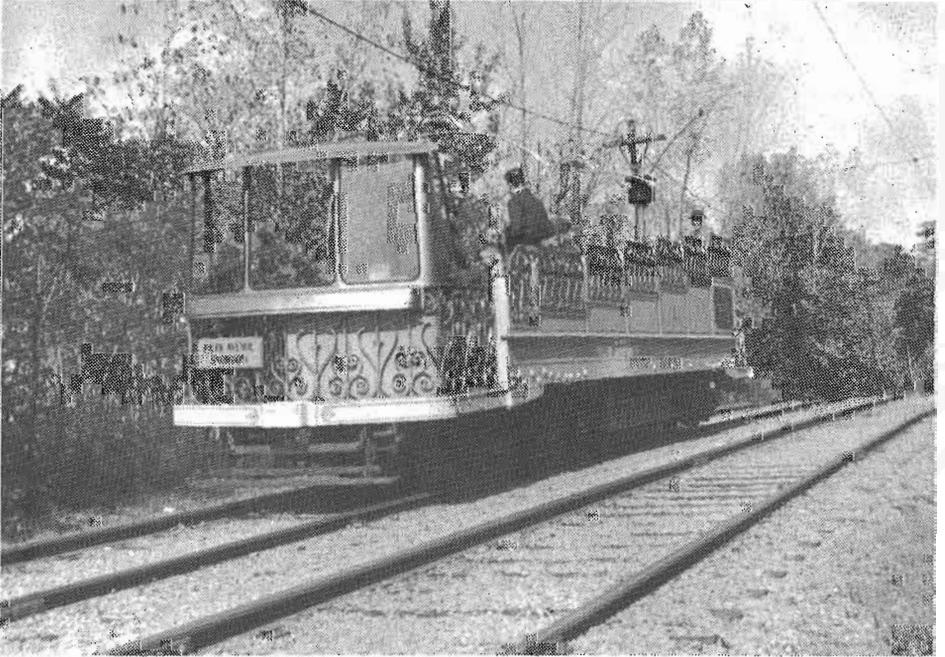
In 1931 M.T.Co.'s famous Observation cars were equipped for use on the mountain, with the idea that one or two might be operated over the mountain as part of a sightseeing route. Belatedly it was found that close clearances in the tunnel presented some danger to persons on the highest seat level, so the plan was dropped. However, the Observation cars did go up several times on charter trips.

In the mid-1940's evening service was provided for the thousands of music lovers attending the open-air symphonic concerts held weekly at the Chalet. Fifteen or more streetcars would sometimes be required.

It can be said without hesitation that the mountain line was successful. It was responsible for countless hours of outdoor enjoyment for young and old. During twenty-seven years of operation. Route 11 cars carried 6,304,653 passengers, without accident or injury of any kind. No trouble was experienced with the cars or track, aside from the tight gauge problem, which finally solved itself. The fine safety record speaks well for the quality of construction, car maintenance, and the good performance of operating personnel.

Remembrance Road (Shakespeare) Route 93 was replaced by buses on May 28, 1955. Route 11 lasted a couple of years longer. It was ironical that the City, which in the 1920's had clamored for a tramway line on the mountain was, in the 1950's, clamoring for its removal. Operation ceased on October 6, 1957. No. 1347 was the last car on the line. Rails were immediately removed and work started on building Camillien Houde Parkway, - an automobile facility that replaced the tramway service.

Now, in 1980, it is interesting to look back at the creation, half a century ago, of a colorful component of the large tramway network existing in Montreal at that time.



MONTREAL'S FAMED OBSERVATION CARS were equipped to run on the Mountain line but did not because of restricted clearance in the tunnel. However on special occasions, notably C.R.H.A. excursions, they did. The last time was on October 5 1957, only one day before service ended, when No. 1, the oldest of the four made the trip, and is depicted here on that day.

Photo by Fred Angus.

DESCRIPTION OF DYNAMIC BRAKE APPLIED TO STRETCARS OPERATED ON THE MOUNTAIN LINE.

When a car is coasting with the controller off, the motors are spinning and are generators of electric current. The dynamic brake consists of an auxiliary controller which connects the motors to a resistor of nickel chrome ribbon mounted under the car. This resistor constitutes a "load" tending to retard the motor speed, and therefore the car speed. The resistor can be designed to allow a flow of current about equal to that required to drive the car up the same grade at the same speed. In this case the speed was fixed at 12 m.p.h. on a 10% grade. In short, the energy of the descending car is turned into electrical energy and dissipated as heat in the resistor, instead of heat at the brake shoes as in conventional braking. With the dynamic brake it is impossible to lock the wheels or go into a skid. To make a dead stop the dynamic controller must be shut off and air or handbrakes applied.

MONTREAL TRAMWAYS CO. - ROLLING STOCK DEPT.

CARS EQUIPPED FOR MOUNTAIN LINE

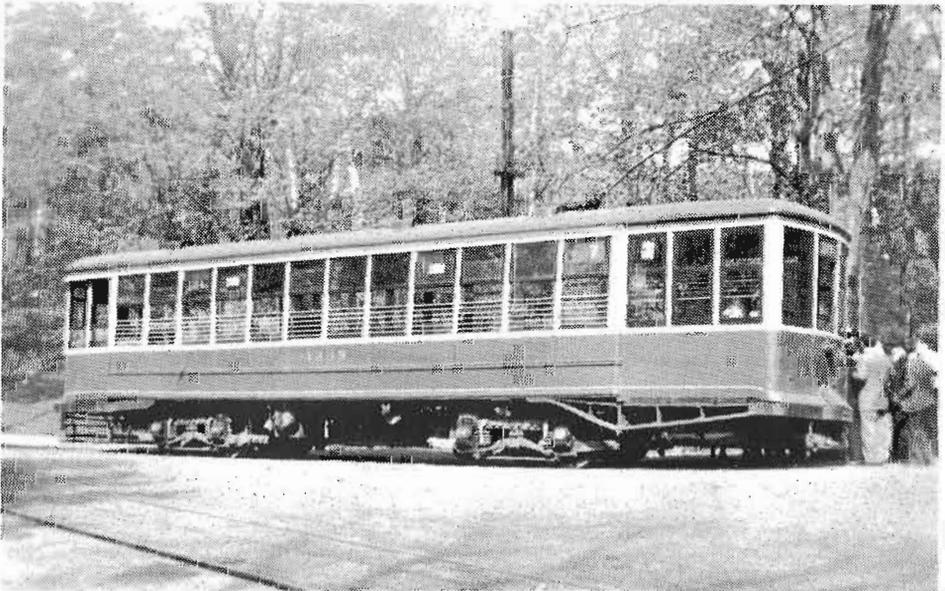
1325	1326	1331	1332
1337	1338	1339	1340
1347	1348	1439	1463
1464	1466	1471	1477
1482	1488	1495	1496

OBSERVATION CARS 1 2 3 4

NOTE: NOS. 1339, 1, 3 are preserved by the C.R.H.A.
1339 and 1 are at the Canadian Railway Museum at St. Constant Que.



No. 1339 ROUNDS THE ROCKY CURVE just before starting the straight ten percent climb towards the Eastern portal of the tunnel. This car, built in 1913, is now preserved at the Canadian Railway Museum, where it represents not only the Mountain route, but also the largest class of street cars ever to run in Montreal.
Collection of R.M. Binns.



CAR 1339 AT MOUNTAIN LOOP with passengers embarking, about to start the run back down to Park Avenue.
Collection of R.M. Binns.



PARK AVENUE WAS ONE OF THE FIRST ROUTES SERVED by 1325-class cars, as shown by this front view taken by LeRoy King in 1913. Seventeen years later, twenty of these cars were specially equipped to run on the Mountain line, not far from Park Ave.

Collection of R.M. Binns.

Building the Tramway Line Over Mount Royal 1927 to 1929

By: Jim Telfer.

(All photos by the author)

It was two days after Christmas 1927 when the first excavating started to remove the huge quantity of earth and rock required to give a track base for a tramway line over the northern top of Mount Royal, linking Shakespeare Road with Mount Royal Boulevard in Outremont.

The contract had been awarded to Cooke Construction by the City of Montreal on December 9 1927, and, under the able management of S.M. Telfer (father of the author), the tough job went through on schedule.

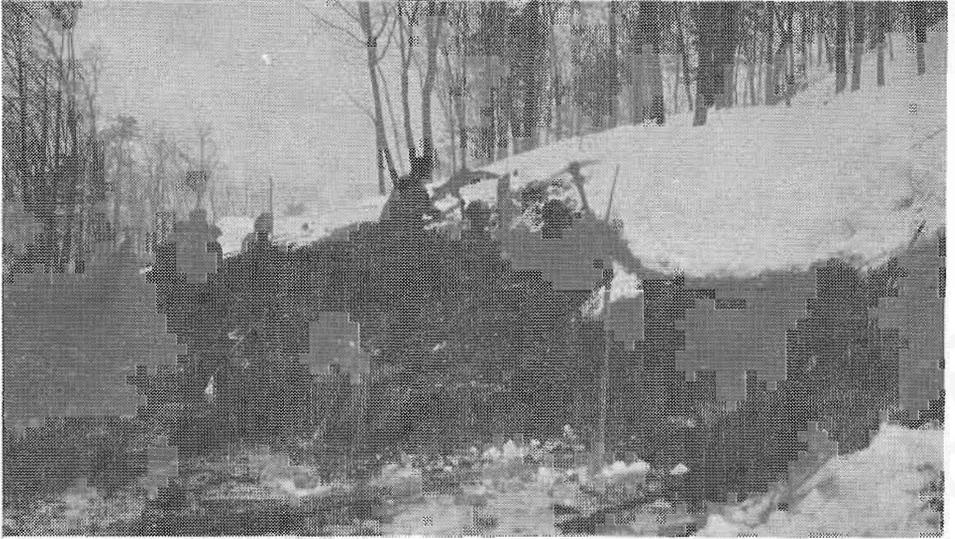
The first day, December 27 1927, eight men with picks, shovels, wheelbarrows and steel bars started to dig into the mountain. The job started near the Western end while other gangs of men worked on the Eastern end. On December 29 there were 43 men at work, while by January 3 1928 the gang had been increased to 75 men. It was on January 3rd that Mr. Telfer broke his ankle just as No. 1 air compressor arrived on the job to supply air for the rock drilling. On the 4th a second air compressor arrived on the job, and the rock drilling was started on January 6th.

By January 8th there were foremen, general labourers, rock drillers, blacksmiths, compressor men, blasters or dynamite men, watchmen, carpenters, mechanics, and surveyors working on the project, and on that day the first dynamite shot was fired at station 79, breaking up about 1100 cubic yards of rock.

The complete cooperation afforded to Mr. Telfer by Mr. John Roy, caretaker of Mount Royal Cemetery, the City of Montreal engineers, and the invaluable understanding of Mr. John Henderson, Caretaker of Mount Royal Park, greatly assisted in making this a fine job.

For more than a year the job went on, and the progress was well recorded by Mr. Telfer from the start until the completed roadbed was turned over to the city preparatory to the construction of the track by the Montreal Tramways Co. in 1929. Some of the more important entries in Mr. Telfer's record tell the story of the job in a vivid and direct way.

February 3rd 1928: The temperature was 14 below zero (F.). The four blacksmiths almost froze. The city engineers didnt show up, however their office burned down destroying their instruments. The Fire Brigade arrived, but too late.



THE START OF THE JOB. Near the future site of the Mountain loop, a gang of eight men turned the first shovelfull of earth for the construction of the Mountain tramway line. The date was Tuesday, December 27 1927, and this historic photo shows the gang at work less than an hour after the first sod was turned.



TWO MONTHS AFTER WORK BEGAN the excavation had reached the summit, about half way between the loop and the tunnel. This view was taken on February 28 1928 looking Eastward, and shows Cooke Construction Company's power shovel loading a truck with blasted rock.



THE PARTLY-COMPLETED RIGHT OF WAY as seen on March 1 1928 looking Westward from just below the summit, near where the previous photo was taken. The temporary light tracks are for carrying debris from the excavation site.



THE EASTERN APPROACH TO THE TUNNEL as seen on March 10 1928, looking Westward before the excavation began. A comparison of this view with one taken of the completed line shows the tremendous amount of rock which had to be removed. At this point a deep cutting was made into the mountainside leading up to the tunnel. The pipe line running to the right of the future cut is to carry compressed air for the drills

February 6th: Clear and cold; 16 below zero. The dynamiters set off a big shot, 1800 cubic yards, using blasting mats.

February 9th: A crew of 126 men was digging, hauling, and dumping. However heavy snow and wind made work very tough on the Eastern end of the job.

February 10th: A $1\frac{1}{4}$ cubic yard Thew power shovel arrived, however the dipper stick was broken. A new stick was installed and the shovel started digging at station 97 with three trucks. The day's loads totaled 132.

February 16th: The shovel was working near the Western end of the job with the trucks dumping and forming a rock fill 400 feet long, 35 feet wide, and approximately 20 feet in height. That day, 232 loads were carried. It was most important that the proper grades be maintained, so the engineers were constantly checking the grades and elevations.

February 25th: The temperature was 20 below zero on the mountain. Men endured the cold but no complaints. Everybody was getting paid and many sensed the coming depression.

February 28th: The Montreal Light Heat and Power men on the job relative to power for a new air compressor. In the afternoon one of the compressor men had his head split open by the backfiring of the engine.

March 1st: Temporary track laid for cars running down the Western grade. The cars were dumped, then drawn back by winch. 247 cars for the day.

March 5th: Mr. Schmidt of Montreal Light Heat and Power was on the job relative to bringing electricity from Côte Des Neiges for work on the tunnel. There was a discussion between Mr. Telfer and the City of Montreal as to pushing through a 500 foot tunnel or making it an open cut. Mr. Telfer suggested an open cut while the city wanted a tunnel. The open cut would be approximately 40,000 cubic yards while the tunnel would require drilling and blasting through vaspar rock and pouring several thousand yards of concrete. The city still insisted on a tunnel.

March 6th: New shovel operator, Carlo Cavicci arrived from the Maritimes. Had it not been for this fine operator the shovel probably would have been lost over the edge due to extremely icy base.

March 9th: Running into the biggest rock. Breaking the big ones by mudcapping.

March 16th: One truck went over the dump, dropped 68 feet. No injuries. Mr. Telfer again suggested to the city the use of an open cut spanned by an arch bridge. The city wanted a tunnel. Mr. Henderson said he heard of some complaints relative to the blasting, one complaint coming from St. Lambert! Imagination works wonders with some people.

May 10th: Mr. Philip Pagano and Mr. Henry Holgate on the job. They said it looked good. Final decision was made regarding a cut or tunnel. The decision was for a tunnel. The shovel was at the Eastern end of the tunnel.

May 25th: Several sharp shots from over Mount Royal Cemetery from a North-Westerly direction were noted between 11:00 and 11:30 A.M., coming from the Côte St. Catherine Road district.

June 12th: Hard digging. Shovel at portals at Eastern end of tunnel.

June 30th: Loose rock at Eastern end of tunnel. Air-gunning concrete, under heavy pressure, into walls as deep as possible.

July 10th: Heavy shots at Eastern end of tunnel. Shovel cab badly dented even when 250 feet from shot. Blasting mats blown high into the air.

July 14th: Montreal Tramways Co. wanted tunnel widened to 35 feet with corresponding height.

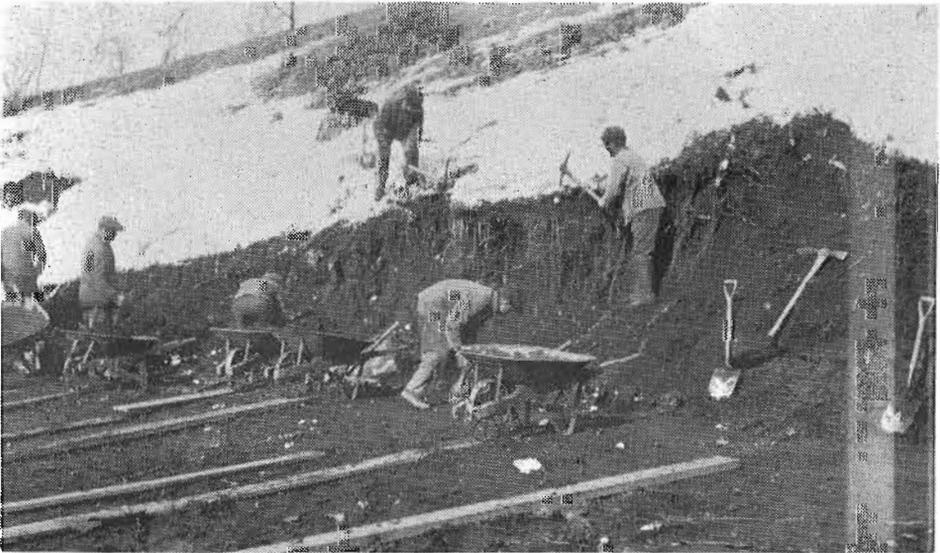
August 12th: The tunnel gang put new 35-lb. rails in the tunnel. Drillers going down 16 feet.

August 14th: Tunnel cut in 199 feet from Eastern end; cut in 212 feet from Western end.

August 28th: Heading of tunnel cut through at 11:00 A.M. This was the first tunnel breakthrough.

September 24th: All grades satisfactory with Montreal Tramways Co. and city engineers. Sixty holes drilled.

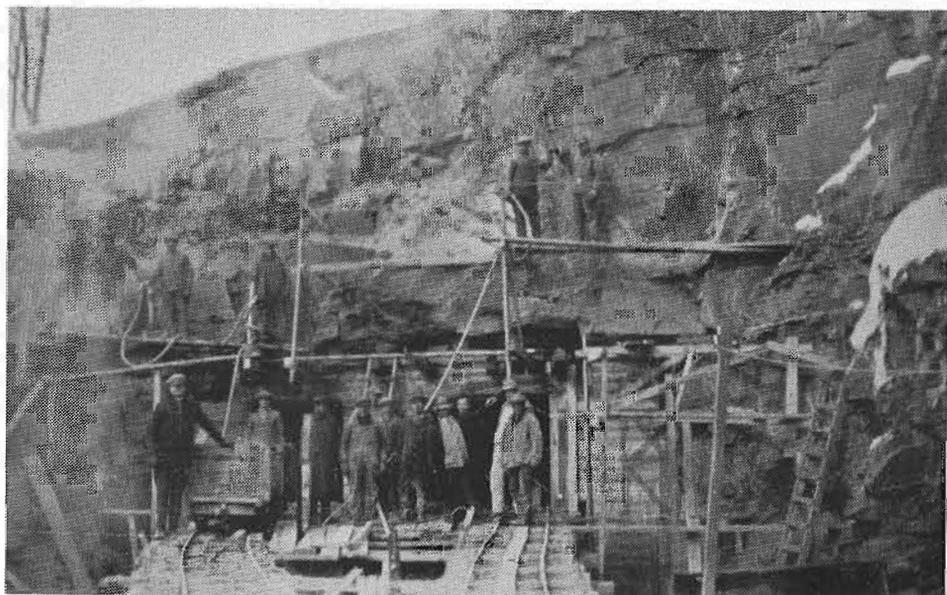
October 24th: Shovel moved up to cut high spots on Northern wall near East end of tunnel.



ACTUAL WORK ON THE CUTTING FOR THE TUNNEL started from the West side, near the Mount Royal Cemetery, and here we see this work on the first day, March 15 1928. At this point only earth and roots are being encountered, but soon the hard work and rock-blasting will begin.



LOADING DYNAMITE INTO THE DRILLED HOLES in preparation for blasting for the cut at the East end of the tunnel. The sun is shining but the weather is cold as work continues in March 1928.



THE EASTERN END OF THE TUNNEL IS BEGINNING TO TAKE SHAPE in this view taken on April 10 1928. In the preceding five weeks much of the rock from the cut has been removed and the bore itself is being started. The photo is strikingly similar to some taken during the construction of the C.P.R. through the Rockies in the 1880's, showing that mountain railroad construction is a tough job whether a tram line or a trans-continental railway. Note the narrow-gauge rail line and car for carrying rock from the tunnel.

November 3rd: Piling rock at South portal to be used for rip rap and stone fill. Men moving in concrete plant.

November 7th: Cleaning up tunnel.

November 8th: Making forms for concrete.

November 9th: Installing water tank and erecting buildings for concrete work.

November 10th: Putting in pipelines, and installing forms for concrete.

November 12th: Putting in footing courses and erecting forms. 74 men at work.

November 13th to 21st: Continuing with footing courses and forms. 91 men at work.

November 22nd: Building forms in tunnel and drilling holes for wire.

December 21st: Reinforcing forms.

January 2 1929: Too cold to pour concrete.

January 3 1929: Eighty-six men on job. Too cold to pour concrete.



THE WEST END OF THE TUNNEL ON JULY 9 1928, about seven weeks before the East and West headings met. Although only one bore is visible, the scene is beginning to appear more like the completed job.

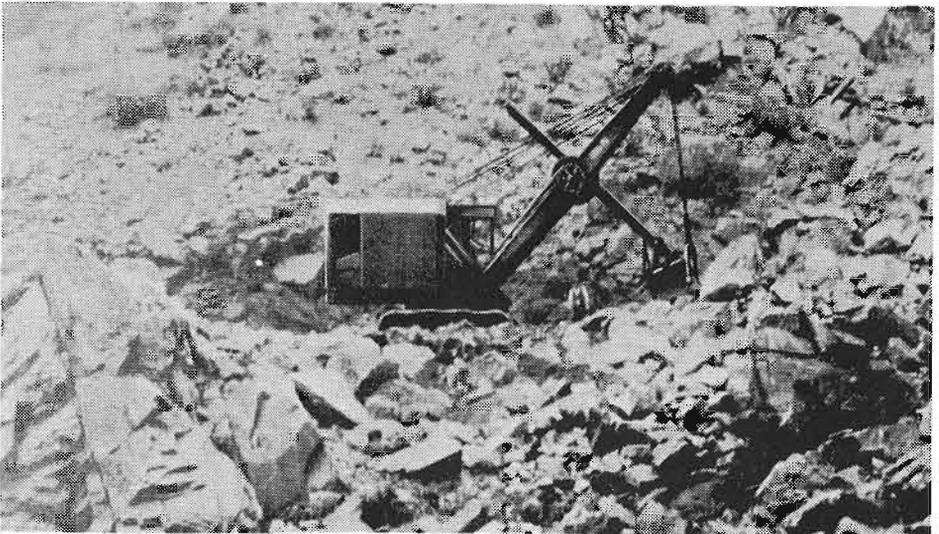
February 16: Brought shovel, air compressors, jack-hammers, trucks etc. etc. to base at head of Shakespeare Road.

March 1929: Poured concrete for tunnel, Mount Royal Avenue bridge, and culverts. The tunnel excavation had been 9400 cubic yards of rock, and the concrete lining of the tunnel was 2900 cubic yards.

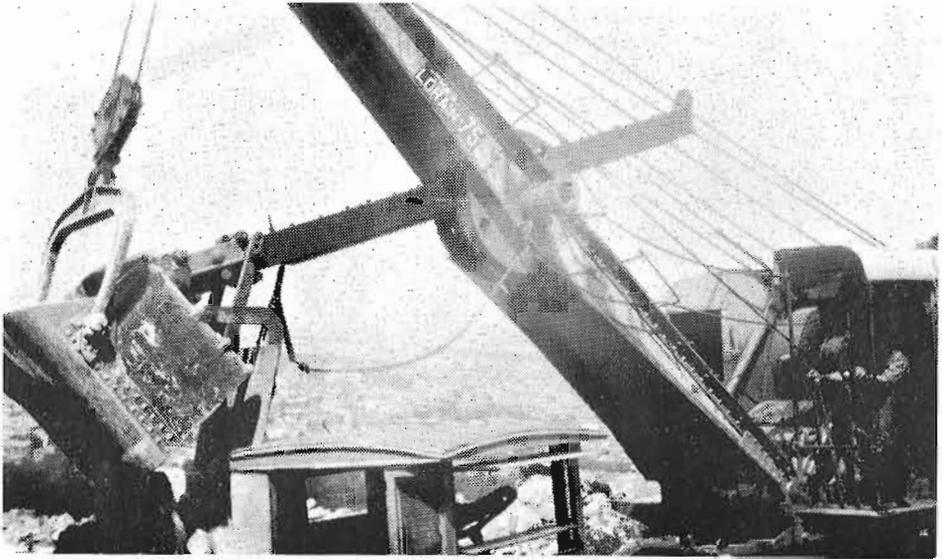
By the Spring of 1929 the job had been completed, and the roadbed was now ready for sub-track fill. Then came the rails.



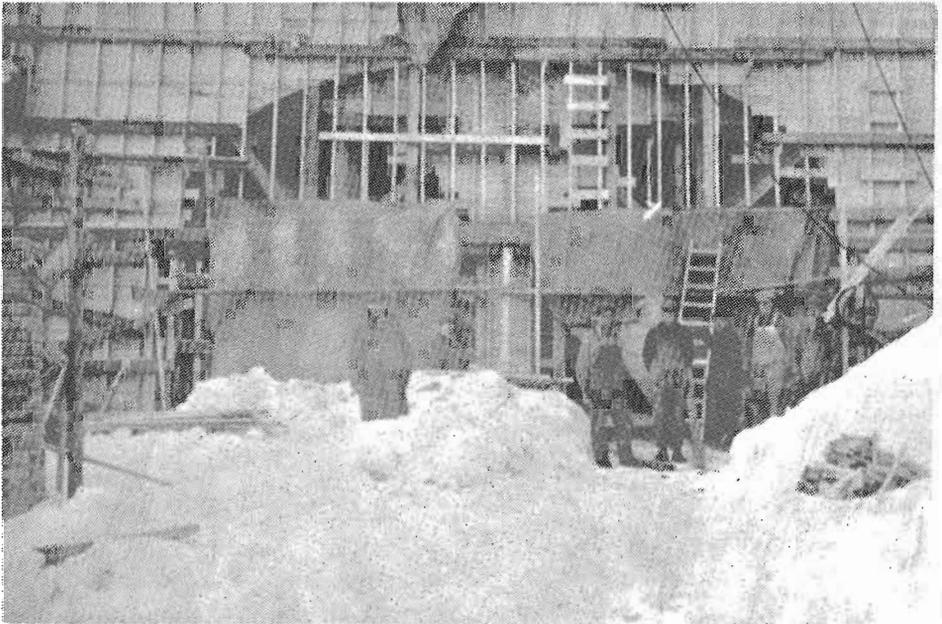
BY JULY 16 1928 WHEN THIS PHOTO WAS TAKEN, the view from the top of the Eastern end of the tunnel was beginning to look like that of the line which would soon be traversing the mountain. The power shovel is busy "side-casting" or throwing rock down the embankment to provide a wider road bed.



DOWN BELOW THE ROAD BED at the East end of the tunnel, another shovel is moving rock which has been dumped down from above. This will protect the embankment from erosion. This entire area was later completely covered by debris and smaller rocks. An interesting note is that the shovel in the photo, bought new in 1928, remained in use, with alterations, until 1974, a period of 46 years! The photo was taken in July 1928

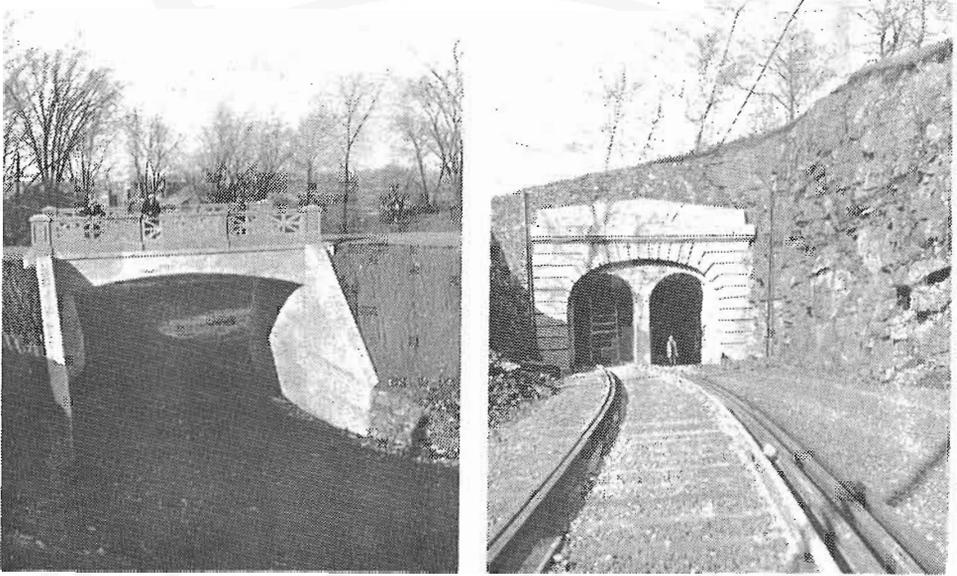


A CLOSE-UP VIEW OF THE COOKE CONSTRUCTION CO. SHOVEL at the East end of the tunnel. The panorama of the city in the background was a familiar sight to a generation of tramway riders.

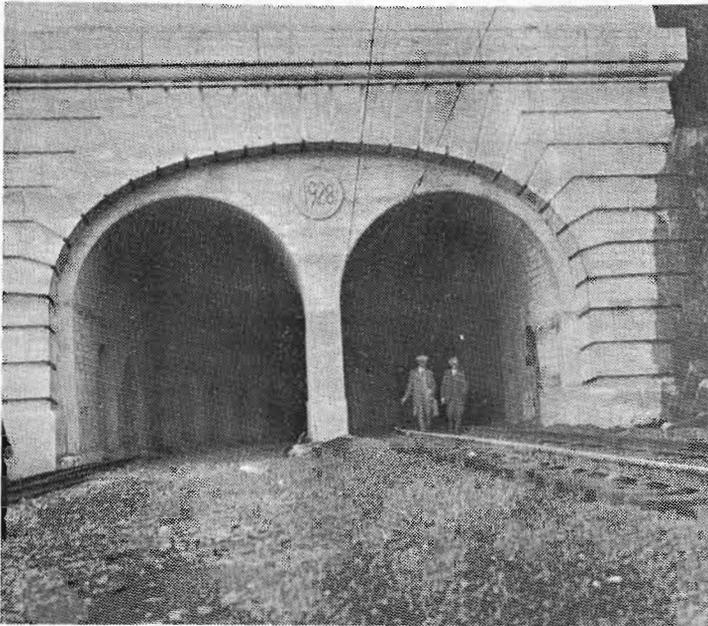


ANOTHER WINTER HAS COME, but the Eastern portal of the tunnel is quickly approaching completion, as the forms are in place ready for the pouring of the concrete. The date is December 21 1928, almost one year since construction began, but now the job was nearing its end.

BY MAY 1929 THE JOB OF BUILDING THE ROADBED WAS COMPLETE, and crews of the Montreal Tramways Co. were already at work at the Western end of the line. However track had not yet been laid under the bridge near the Park Ave. end of the line when this photo was taken.

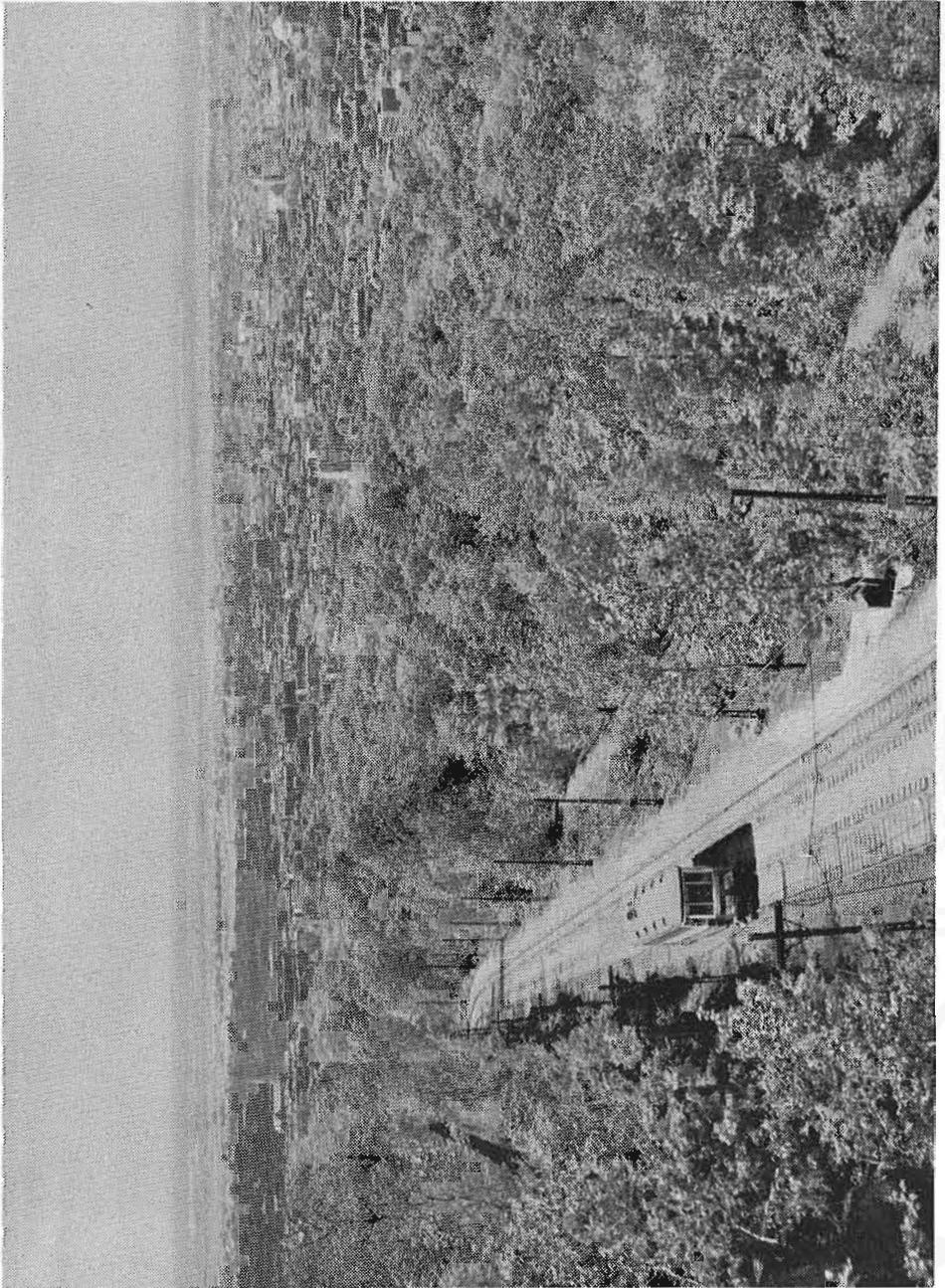


ON A QUIET SUNDAY MORNING IN 1929, the author took a last look at the completed roadbed and tunnel. Here we see the West portal, and already one track has been laid by the Tramways Company, and the trolley wire is starting to be put up.

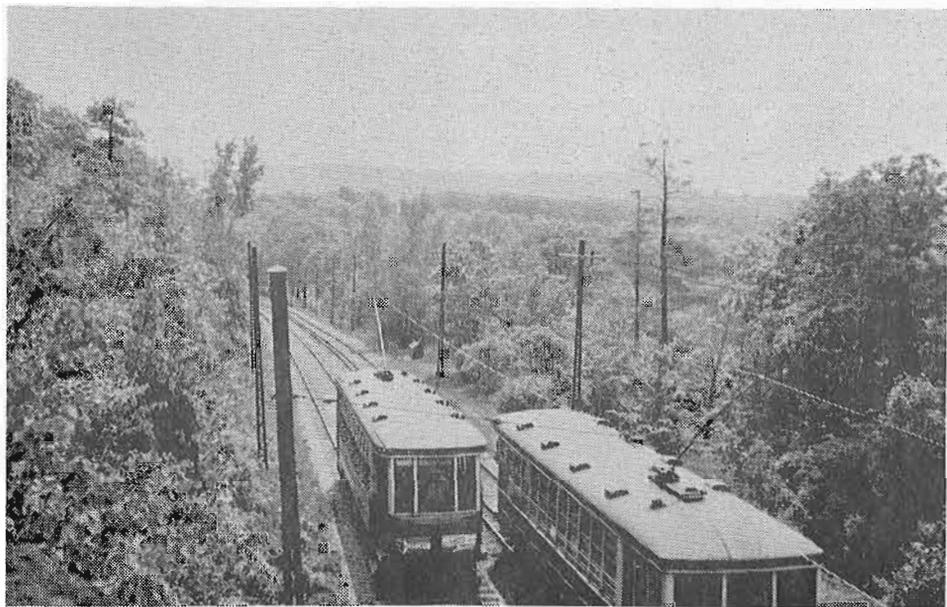


THE EASTERN PORTAL OF THE COMPLETED TUNNEL in 1929. This view shows some of the lining of the tunnel interior. Although the roadbed was now finished it would be July 1930 before street cars would begin regular service.

“ROUTE II AS WE KNEW IT”



THE NORTH-EAST SECTION OF MONTREAL stretches in a panorama, as car 1496 climbs the 10% grade leading to the tunnel near the top of the Mountain line.
Toohey Collection.



AN UNUSUAL VIEW SHOWS TWO CARS PASSING near the tunnel entrance. No. 1474 is passing another 1400-type car.
Toohey Collection.



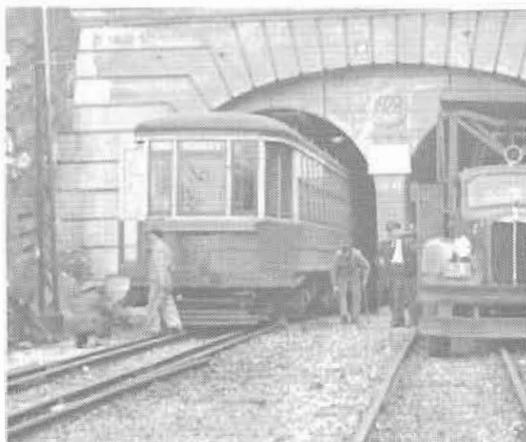
THE SECOND CAR OF THE SERIES, No. 1326, emerges from the West portal of the tunnel and continues its climb to the summit, only a short distance away.
Toohey Collection.



THIS VIEW LOOKING WEST shows car 1496 climbing the slopes of Mount Royal. Note the famous St. Joseph's Oratory in the distance on the right-hand side.
Toohey Collection.



FRAMED BETWEEN BIRCH TREES, AN EASTBOUND TRAM passes between a steep cliff on the left, with the Mount Royal Cemetery on the right.
Toohey Collection.



THE CONDUCTOR IMPATIENTLY LOOKS AT HIS WATCH, the motorman looks on, while a maintenance worker for the M.T.C. jacks 1347 back on the track. In a few more minutes the car would be on its way again, none the worse for wear. However the next day No. 1347 made its final run, and as it descended, the whine of dynamic brakes and the squeal of flanges was heard for the last time on Mount Royal. By coincidence, two days before, the first earth satellite had been launched, so as the space era began the era of tramways on the mountain came to an end.
Photo by Fred Angus.



MISHAPS ON THE MOUNTAIN LINE WERE RARE and of a minor nature. In fact more than 6 million passengers were carried without injury. However an annoying happening occurred on October 5 1957 when No. 1347 hit a rock at the East entrance of the tunnel and derailed. A trouble truck was soon on the scene, and 1347 was rerailed, to continue service for one more day.
Photo by Fred Angus.

BACK COVER

ABOUT 1950, CAR 1488 WAS PHOTOGRAPHED climbing the 10% grade up to the East portal of the tunnel. This view clearly shows the excellent construction of the track and the good maintenance it received. This was a feature of the line that continued as long as it ran.
Toohey Collection.

