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Canadian Rail is continually in need of news, stories, historical data, photos, maps and other material. Please send all contributions to the editor: Fred F. Angus, 3021 Trafalgar Ave. Montreal, P.Q. H3Y 1H3. No payment can be made for contributions, but the contributor will be given credit for material submitted. Material will be returned to the contributor if requested. Remember "Knowledge is of little value unless it is shared with others".

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FRONT COVER: Ontario Northland 2-8-0 steam locomotive 137 raises steam at Englehart shed preparing to haul a special train to North Bay in May, 1969. Subsequently this locomotive was damaged in a fire and was retired from excursion service. Today it is on display at the head of the Museum train in Cochrane, Ontario.

Photo by Robin Russell.

As part of its activities, the CRHA operates the Canadian Railway Museum at Delson / St. Constant, Que. which is about 14 miles (23 Km.) from downtown Montreal. It is open from late May to early October (daily until Labour Day). Members, and their immediate families, are admitted free of charge.

The CPR D10 Class Locomotive on a Stamp

Canada's Most Numerous Locomotive Type

By Hugues W. Bonin



On October 24, 1984, the Canadian Post Office, as part of a series of sixteen stamps over a four-year period, issued four stamps depicting steam locomotives. One of these was a 64-cent stamp depicting a Canadian Pacific Railway 4-6-0 D-10 type steam locomotive. There were 8,200,000 copies of this stamp for regular use as well as 700,000 issued as part of a souvenir sheet in which the 64-cent was se-tenant with the other three stamps of the series (a 32-cent with Great Western Ry. 0-6-0 "Scotia" of 1861, a 32-cent with the 4-4-0 C.P.R. contractor's engine "Countess of Dufferin" bought in 1877, a 37-cent with a Grand Trunk 2-6-0 of class E3).

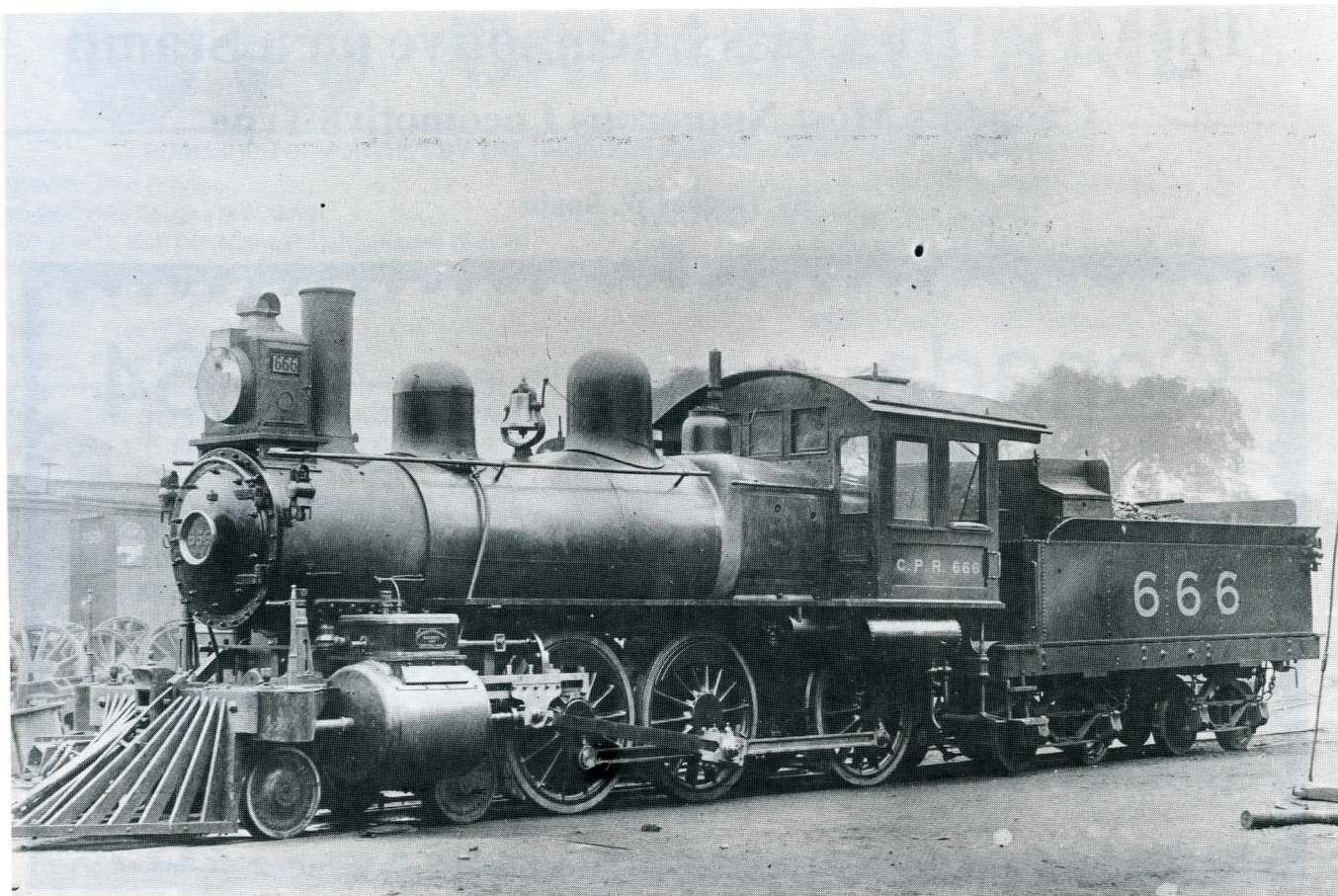
This series of four stamps covers locomotives built during the period from 1860 to 1905, a time characterized by a spectacular expansion of the Canadian railway network, and the construction of the first transcontinental main line which proved to be a major factor in the development of Canada. The steam locomotives themselves evolved during this period from flimsy-looking machines to sturdy all-steel engines intended for universal service. By 1905, the larger locomotives were still in the future, and the Ten-wheelers and Consolidations (2-8-0) were among the heaviest and most powerful locomotives of the time. The only steam locomotives in Canada with trailing wheels under the firebox were the few of the Atlantic (4-4-2) type in fast passenger service between Montreal and Ottawa, as well as a dozen of the then brand new Canadian Government Railways Pacifics (4-6-2) built in Kingston in 1905. These were numbered 401 to 412 on the

CGR and later became CNR K-1a type 5500 to 5511. Even the Mikado type (2-8-2) would not appear in Canada for several years. Therefore the 1860 - 1905 period was dominated by the 4-4-0 in the early days with the 2-6-0, 2-8-0 and 4-6-0 becoming more common by the turn of the century.

The D10-class locomotive represented on the 64-cent stamp is typical of the 502 locomotives of this class owned by the Canadian Pacific Railway, from class D10a to D10j. A typical locomotive of this class, D10h No. 1095 is illustrated here. This locomotive was built in 1912 by the Canadian Locomotive Company of Kingston, Ontario, and is displayed in Confederation Park in Kingston in front of the historic City Hall.

The first 4-6-0's acquired by the Canadian Pacific Railway came with a railway leased to the CPR in 1884. This was the Toronto Grey and Bruce Railway which had lines from Toronto toward Lake Huron in the Bruce Peninsula area. The locomotives acquired from the TG&B included one 4-4-0, five 4-6-0's and six 2-8-0's, all built in the early 1870's as 3' 6" narrow-gauge locomotives and later standard-gauged. The Ten-wheelers, TG&B Nos. 8 and 11 to 14, became CPR 159 to 163 and were used for a short time only, all having been retired from the roster by 1892.

It does not appear that it was this gaggle of early 4-6-0's that impressed the CPR mechanical experts enough to adopt this wheel arrangement on such a grand scale. It was rather the tracking problems of most of the CPR 2-6-0 Mogul-type locomotives



A fine example of a late nineteenth century CPRTen-wheeler was class SR2 No. 666, built in the Company's Delorimier Shops and placed in service in July, 1898 at which time this photo was taken. In November 1906 this locomotive was renumbered 472, and classified D4d. In October 1913 it became 372, and continued in service until January 1928 when it was retired.

Canadian Pacific photo No. 6654.

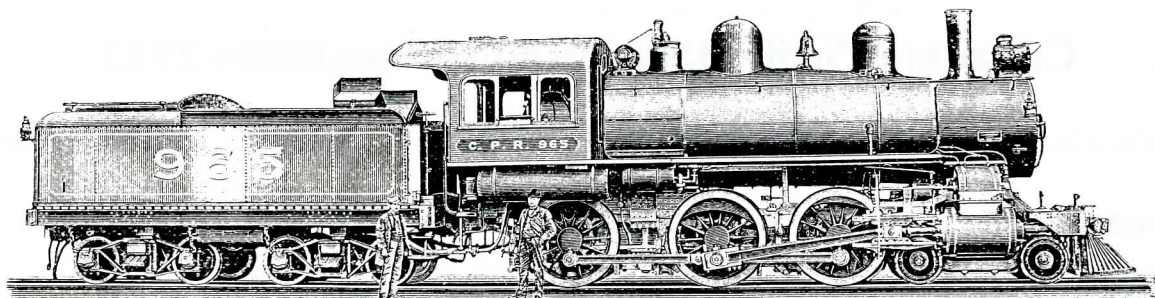
acquired to handle the trains that were becoming too heavy for the numerous 4-4-0's in the late 1880's and early 1890's. These problems were mostly due to excessive flange wear on the leading drivers, and it was felt that a 4-wheel pilot truck could do a better job of leading the front driving wheels into the sharp curves of the track.

Although two classes of Ten-wheelers were already well in the construction stage by April 1889, as classes S.N. and S.O., it was one of the two locomotives of the class S.M. that was put in service first. It bore number 456 and was a real beauty with sleek lines and 75" drivers and was intended for fast passenger service between Montreal and Toronto, thus offering stiff competition to the rival Grand Trunk. The other class S.M. engine was No. 459 and, during this period, several class S.N. (69" drivers) and S.O. (57" drivers) were outshopped for freight service.

The CPR was obviously pleased with the 4-6-0. Hundreds of them were acquired between 1905 and December 1913 when the last, D10h No. 1111, was delivered by CLC in Kingston. During this time interval the Ten-wheelers were built by and for the CPR at a sustained high rate, and many of the earlier engines underwent

the two major renumbering exercises along with the fleet of other CPR locomotives. The earlier Ten-wheelers had been classified as S.M., S.N., S.O., S.R., S.T., S.V., with many sub class designations. After the 1912 - 1914 renumbering and class changes, the 4-6-0's were numbered from 300 to 1111 and 1996 to 2120, and they were classified C1a to C1e, C2a, D1a, D2a to D2c, D3a to D3j, D4a to D4g, D5a and D5b, D6a to D6d, D8a, D9a to D9c, D10a to D10j, D11a to D11c, D12a, E2a, E4c, E5g, E5m.

In addition to the CPR's shops (New Shops 1883 to 1904 and Angus Shops 1904 to 1992) the Ten-Wheelers were built by many locomotive builders from several countries as follows: Canadian Locomotive Company (Kingston), Montreal Locomotive Works, Rhode Island Locomotive Works, Rogers Locomotive Company, Baldwin Locomotive Works, Schenectady Locomotive Works (ALCO), North British Locomotive Company (Glasgow, Scotland), Sächsische Maschinenbau A.G. (Saxon Locomotive Building Company of Chemnitz, Germany), Richmond Locomotive and Machine Works (Richmond, Virginia), Neilson and Company (Glasgow, Scotland). The five D11's were notable among the CPR 4-6-0's as they were of the Camelback type (sometimes known as

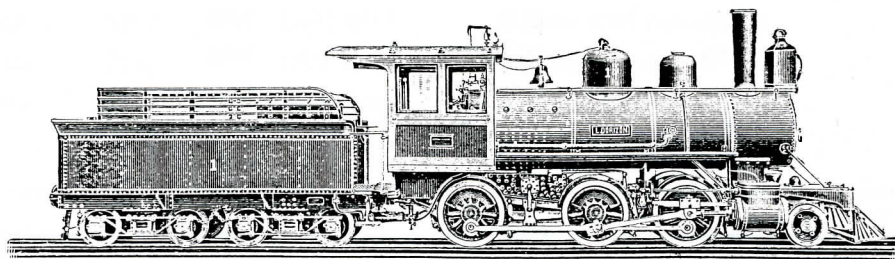


The Saxon Engine Works, late Rich. Hartmann, Limited

CHEMNITZ (Germany),

Carry on the construction of **LOCOMOTIVES** of every description.

**Number
of
Workmen,
5,200.**



**Capital,
\$3,000,000.**

This advertisement for the Saxon Locomotive Works appeared in the magazine "Railway and Shipping World" starting in March, 1904 and for more than a year thereafter. Shown is CPR 965 which was delivered in October 1903, one of a group of twenty ST12 class Ten-Wheelers built by Saxon between September 1903 and March 1904. In April 1908, this locomotive became No. 544, classified D6d. It retained that number in the 1912 number series, going to the Dominion Atlantic Railway in May 1937, and being retired in April 1944. Despite the considerable advertising campaign, the Saxon Engine Works does not appear to have received further orders from Canadian railways. The Railway and Shipping World, May 1904.

"Mother Hubbards"), built with a large Wooten firebox designed to burn anthracite coal. This type had the cab located astride the boiler in front of the firebox with a smaller cab for the fireman at the back of the locomotive; very few of that type were used in Canada. Their performance was less than desired, and the five engines were rebuilt into conventional locomotives soon after, keeping their numbers and the 4-6-0 wheel arrangement, but being reclassified D10d in 1905.

The D10 class was a very successful one, and locomotives of this type were soon found in all parts of the CPR system. Several were assigned to, and lettered for, CPR subsidiaries: Esquimalt & Nanaimo, Dominion Atlantic, Quebec Central, Kettle Valley, and the South Eastern / Montreal & Atlantic system. They were rugged machines and usually required less maintenance than several other classes of locomotives. Initially they were placed in main line passenger, mixed and freight service, as well as in switching and transfer work. A few of these engines even bore the Tuscan red passenger livery, No. 962 being the most notable example. With the acquisition of larger steam locomotives, the Ten-wheelers were soon confined to secondary and branch line service as the ever increasing size of the main line trains exceeded their limited

capabilities. However the CPR had a multitude of secondary and branch lines unsuited for locomotives much larger and heavier than the D10. This allowed a large number of these fine locomotives to linger on until the demise of steam power in 1960.

As a footnote, it is interesting that the actual number of D10 4-6-0's reached 507 as CLC in Kingston built five locomotives identical to the CPR D10's for the Algoma Central & Hudson Bay Railway in 1912 as their class T1, numbered 100 to 104. They only differences between them and the CPR type are very minor, being details such as running board skirts, headlight and lighted number board shape and placement, and, of course, lettering.

Unfortunately none of the Algoma Central Ten-wheelers was preserved, but we are fortunate that several persons had the foresight to save nine of the CPR Ten-wheelers from scrap, and today a few are even in operating condition. Thus one can see examples of these very significant early twentieth century locomotives in widely separated locations. It is very likely that it will still be possible to see, and ride behind, a CPR Ten-wheeler well into the twenty-first century, by which time these locomotives will be more than one hundred years old.

Canadian Pacific D10 Locomotives 1905 - 1913

Numbers are as per 1912 numbering system

NUMBERS	CLASS	BUILDER	DATE	QUAN.
600 - 613	D10d	Richmond	1907	14
614	D10d	MLW	1907	1
615 - 624	D10d	Richmond	1907	10
625 - 669	D10d	MLW	1907	45
670 - 684	D10c	CLC	1906	15
685 - 699	D10b	MLW	1906	15
700 - 709	D10a	CLC	1905	10
710 - 739	D10b	MLW	1905	30
740 - 749	D10c	CPR	1905	10
750 - 759	D10b	MLW	1906	10
760 - 769	D10c	MLW	1906	10
770 - 779	D10c	CPR	1906	10
780	D10d	Richmond	1907	1
781	D10d	MLW	1907	1
782 - 784	D10d	MLW	1907	3
790 - 794	D10c	CPR	1905	5
800 - 819	D10e	MLW	1908	20
820 - 832	D10e	CPR	1909	13
833 - 842	D10e	MLW	1909	10
843 - 847	D10f	MLW	1909	5
848 - 869	D10e	CPR	1910	22
870 - 890	D10g	CPR	1910	21
891 - 894	D10g	CPR	1911	4
895 - 912	D10g	CLC	1911	18
913 - 933	D10g	CPR	1911	21
934 - 948	D10g	MLW	1911	15
949 - 961	D10g	CPR	1911	13
962 - 986	D10j	MLW	1912	25
987 - 1057	D10h	MLW	1912	71
1058 - 1061	D10h	MLW	1913	4
1062 - 1076	D10k	SCHY	1912	15
1077 - 1086	D10k	MLW	1912	10
1087 - 1111	D10h	CLC	1913	25

TOTAL 502

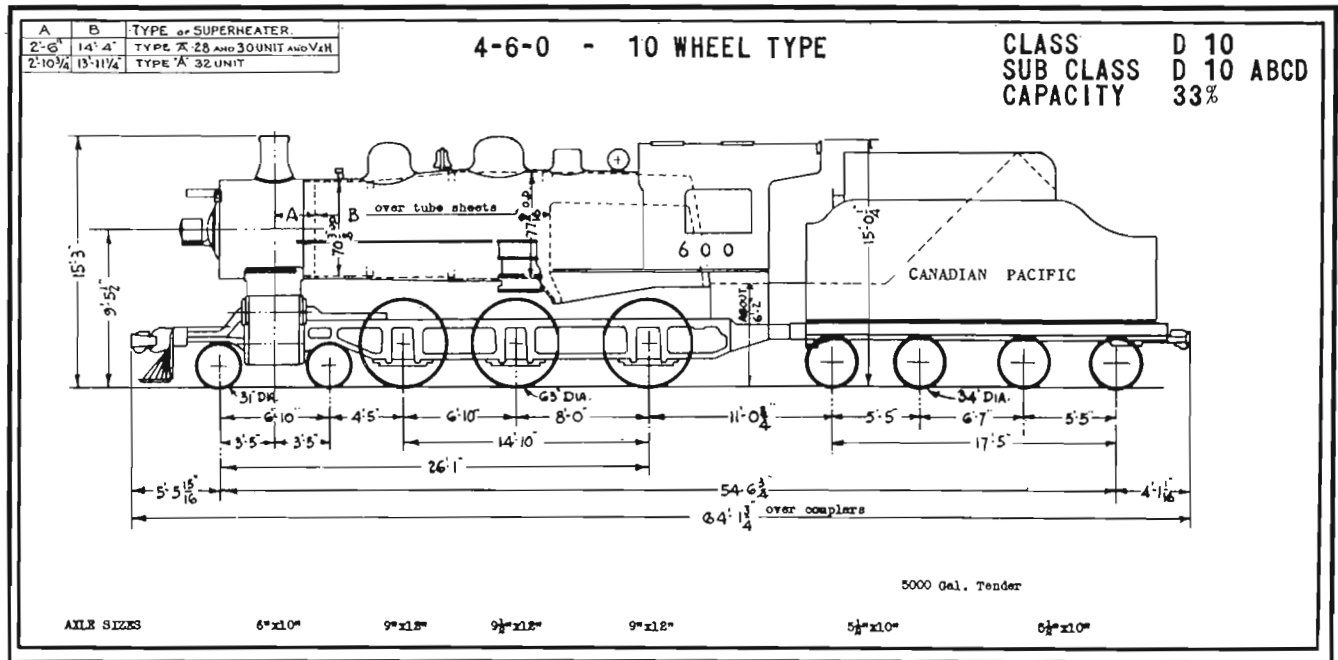
NOTES

694 was scrapped in July 1910 and never included in 1912 series.

863 was reclassified as D10m in 1921.

Canadian Pacific Ten-wheelers Preserved

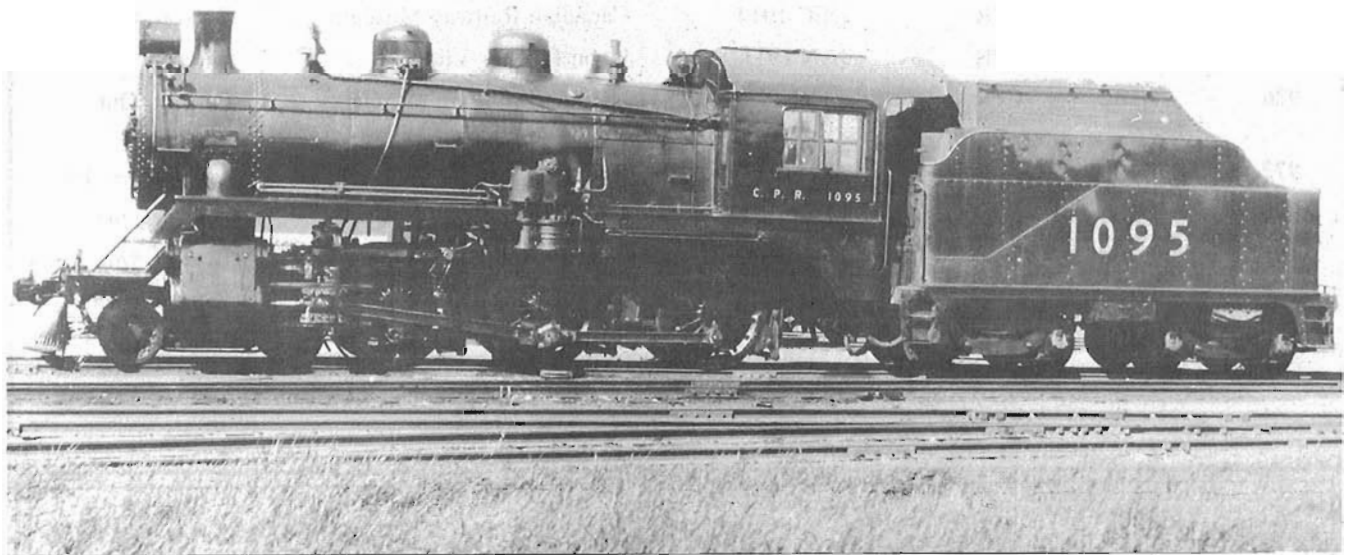
NUMBER	CLASS	BUILDER	DATE	ORGANIZATION	LOCATION
453	D4g	CPR	JAN 1912	O. Winston Link	Rome, N.Y.
492	D4g	CPR	DEC 1914	Canadian Railway Museum	Delson, Que.
894	D10g	CPR	JAN 1911	Doon Pioneer Village	Kitchener, Ont.
926	D10g	CPR	AUG 1911	National Museum of Science and Technology	Ottawa, Ont.
972	D10j	MLW	SEP 1912	Rail Tours	Jim Thorpe, Pa.
999	D10h	MLW	MAY 1912	Canadian Railway Museum	Delson, Que.
1057	D10h	MLW	DEC 1912	Ontario Rail Association	Beeton, Ont.
1095	D10h	CLC	OCT 1913	City of Kingston	Kingston, Ont.
1098	D10h	CLC	NOV 1913	Rail Tours	Jim Thorpe, Pa.



ABOVE: The basic dimensions of a D10 as shown in the official CPR diagram book.

NEXT PAGE, TOP: CPR D10h No. 1095 shown at Angus Shops in Montreal in October 1924. It still has its original style lettering and high mounted headlight. Note the small "C. P. R. 1095" on the cab, as well as the large numerals on the tender. The major change in lettering occurred in 1928 when the full "Canadian Pacific" appeared on the tender, and the cab side sported only the locomotive number. Collection of Mr. John Mayell.

NEXT PAGE, BOTTOM: Ten-wheeler 1095 near the end of its active career. It appears in this photograph taken at Woodstock, Ontario on April 4 1958, with few changes from its appearance in 1924. The headlight is now centred on the smokebox front and there is a lighted number board above the headlight. The lettering is the latest style and very similar to that it now bears as preserved in Confederation Park in Kingston. Collection of Mr. John Mayell.



Important Improvements on Saskatoon - Calgary Lines

By William Burns

Engineer of Construction, Western Lines, CNR

From Canadian National Railways Magazine, November 1922

The territory through which the Canadian National Railway runs, in going from Saskatoon to Calgary, before the advent of the railway, was known as the Goose Lake Country and this name generally applies to the whole district from Saskatoon to Drumheller, a distance of 313 miles, through which our line, locally known as the Goose Lake Branch, runs.

Previous to the year 1904, excepting for a short distance out from Saskatoon, there was little, if any, settlement in this whole territory which is now tributary to the Goose Lake Branch; the country was all open prairie with very little land that was too rough for cultivation. In 1903, 1904 and 1905 the homesteads were rapidly being taken and small settlements were gradually being formed in the first fifty miles out from Saskatoon. The early settlers were made up of English speaking people from the older provinces of Canada and from the United States, and the fame of the chocolate clay of the Goose Lake Country for wheat raising was becoming known all over the country with the result that, by the end of the year 1905, there was an insistent demand for a railway to be built from Saskatoon southwest and west through the then settled portions of the district. At that time the only railway in Saskatoon was the "Qu'Appelle Long Lake and Saskatchewan Railway" running between Regina and Prince Albert, owned by an English Company, but leased to and operated by the Canadian Pacific Railway. The Canadian Northern main line passing about 15 miles to the North of Saskatoon was completed to Edmonton in December 1905. At the end of 1906 the Canadian Northern Railway Company became the owners of the "Qu'Appelle Long Lake and Saskatchewan Railway" and began operating it early in 1907. Soon after taking over this line surveys were started from Saskatoon southwest and west through the Goose Lake District and actual construction started the same year by the C.N.R. By the end of 1909 track was laid to Kindersley, the first divisional point out from Saskatoon, and by 1912 the railway was completed to Hanna the second divisional point. During the years 1907 to 1912 the district filled up very fast and the capacity of the railway, hurriedly built and in hardly any part completed, was taxed to the limit hauling in settlers' effects, merchandise, coal, etc., and hauling out the grain.

In 1913 the connection was completed through to Drumheller and then on to Calgary, the terminus of this branch. With the opening up of extensive areas of farm land, and the consequent large influx of immigrants the question of a fuel supply at once became a live question on the prairies. While a certain amount of wood for fuel is available, practically all the country south of

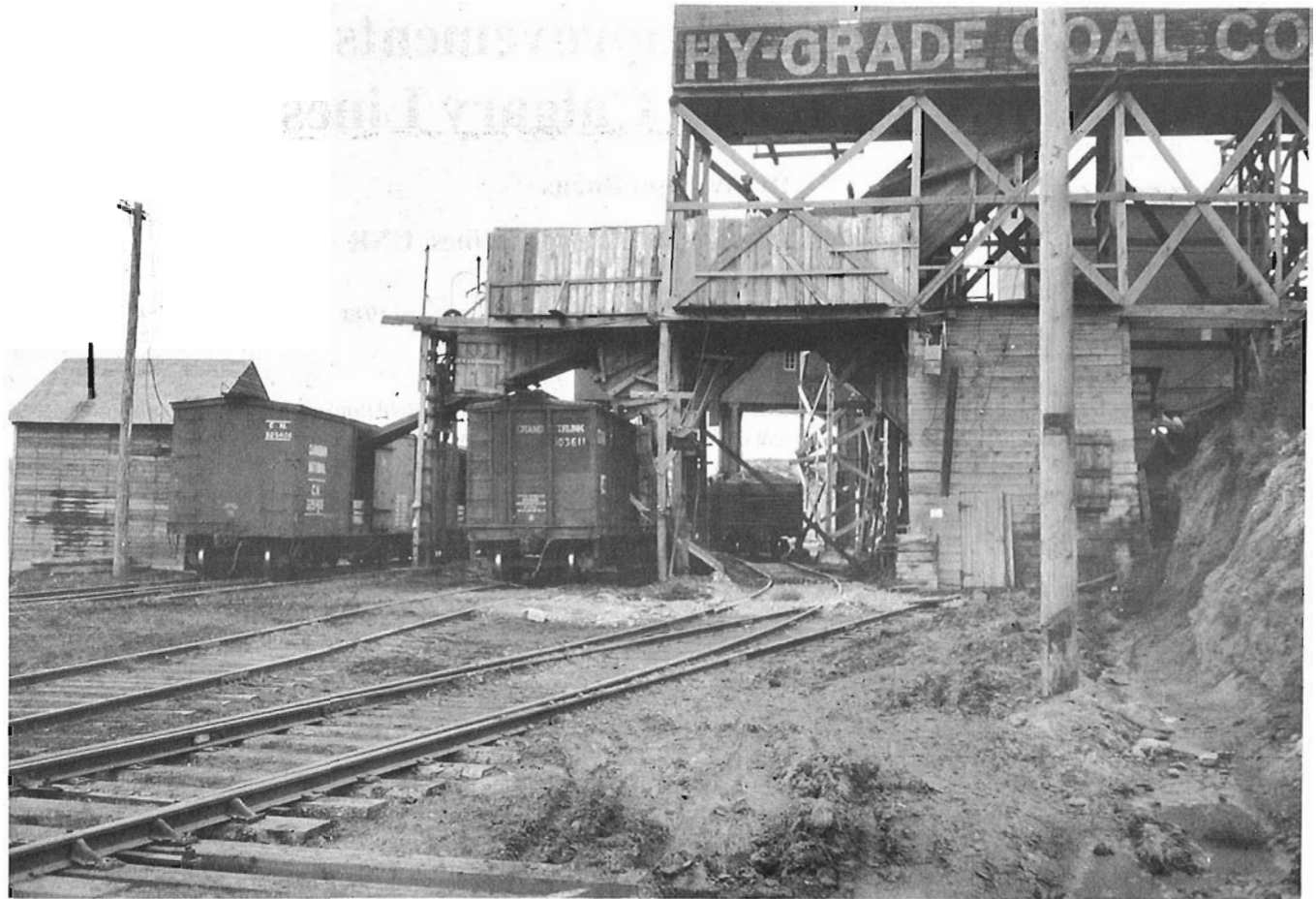
Humbolt, Saskatoon, Battleford and Edmonton in the Provinces of Saskatchewan and Alberta is dependent on coal for heating and domestic purposes. In building the C.N.R. line from Saskatoon to Calgary one of the great obstructions to overcome was the crossing of the Red Deer Valley, getting down to the river from the east, crossing and getting away again on the west. Other railway companies had made extensive surveys and abandoned the project; however, the Canadian Northern Railway found a practicable route down the Mecheche and Fox Coulee from the east and up the Rosebud Valley on the west, establishing on the west side of the Red Deer River the town of "Drumheller". Mr. "Sam" Drumheller, a pioneer, had settled there a few years previously and had been working a coal seam to a very limited extent for the benefit of the very few people in the vicinity. With the coming of the Canadian Northern Railway Drumheller at once found its own, and from that day to this the fame of the Drumheller coal fields has increased and grown, until now shipments of domestic coal from here are larger than from any other similar coal field in the west. Included in the Drumheller Coal District there are now 28 producing mines, 15 at Drumheller, 6 at Rosedale and 7 at Wayne. The greatest actual production so far in one day has been 8000 tons in August 1921, but with all the mines working to capacity this would be increased to 10,000 tons. The total output from the coal mines in the Drumheller district, as tabulated by the Department of Mines for Alberta, was:-

In 1913, 52,900 tons, employing 223 men.

In 1917, 660,974 tons, employing 1042 men.

In 1920, 1,210,687 tons, employing 1782 men.

Practically the entire output of coal as noted above from the Drumheller field is shipped over the Canadian National Railway to points on their system as far east as Winnipeg. The shipments of wheat alone from stations on the Goose Lake Branch, which amounted to 4,161,490 bushels in 1913, had grown to 15,044,960 bushels in 1916; the stock raising industry had also assumed considerable dimensions, shipments of cattle alone in 1917 amounted to 32,490 head. With such a rapid increase in the shipments of coal, grain and live stock, the Railway Company decided in 1918 to build a second or double track from Munson to Wayne, a distance of 20 miles, relay with 85 pound steel the whole line, replace wooden trestles with concrete structures and solid embankments, extend sidings and build passing tracks. It was also



*Coal Mines at Drumheller, Alberta on the CN Line about 1925
National Archives of Canada, Photo No. PA-87284.*

arranged, to revise the line or divert the river in the Rosebud Valley at several points in order to reduce the number of river crossings, rearrange Drumheller Divisional Yard and enlarge its capacity, replace wooden bridges across the Rosebud with steel structures on concrete abutments, ballast the whole line and make other improvements that would permit train operation and handling of the increasing business to the best advantage.

From 1918 to 1921 improvements have been carried on and practically completed between Saskatoon and Wayne, a distance of 322 miles. There still remains to complete, the portion between Wayne and Calgary, a distance of 78 miles. Since these improvements were started in 1918 the entire line from Saskatoon to Wayne has been relaid with 85 pound steel, including the double track portion between Munson and Drumheller. The total quantity of rails and fastenings required to lay with the heavier steel amounted to 49,250 gross tons; the lighter steel that was removed has been used in branch lines. It was arranged that the relaying should be done during the periods when the grain and coal traffic was lightest. Ballasting was carried on during the years 1918, 1919 and 1921 and approximately 800,000 cubic yards of gravel were used for this purpose; not included in this is the filling of wooden trestles being replaced by concrete culverts and solid embankments.

Earth cuts were widened to improve snow conditions and the material used for filling trestles.

Between Saskatoon and Calgary there are some 173 grain elevators with a total capacity of 6,850,000 bushels. To permit of the handling of trains to the best advantage it was found necessary to provide more space on Sidings and Passing Tracks, and in three years a total of 37,000 feet or seven miles of new track for this purpose has been put in use.

Before work for the double track between Munson and Wayne was started in 1918, the total trackage in Drumheller Yard amounted to 5.5 miles with a capacity for 450 cars. With the improvements now completed we have a trackage of 12.5 miles and a capacity for 860 cars. The layout of the yard has been rearranged with the result that service to the mines, which started operations since the track was first laid, has very much improved, and cars are handled to and from the mine spurs without interfering with other traffic.

From Rosedale Station West to Redlands, a distance of 22 miles, the railway follows the deep, tortuous valley of the Rosebud River. As originally constructed the railway crosses the river 67 times on wood pile bridges. Before replacing these pile bridges

with permanent structures, surveys were made to determine how many of them could be avoided either by revising the line or diverting the river. To date one line revision one and a half miles long, between Mile 333-335, has been completed eliminating six river crossings, shortening the line 2200 feet and cutting out 239 degrees of curvature; also four river diversions between Miles 324 and 337 have been completed eliminating eight river crossings. One or two other line revisions are contemplated and a number of other river diversions will be undertaken, and when these are all completed the 67 crossings as originally built will be cut down to 29 permanent crossings of steel and concrete construction.

As the average cost of a permanent steel girder and concrete abutment bridge across the Rosebud River is approximately \$48,000.00, a large direct saving has been effected by building the line revision and stream diversions, as well as doing away with

bridge openings in the track which are a source of danger to train operations.

In connection with replacing the wooden trestle bridges across the Rosebud River with permanent steel girder bridges, to date seven of these bridges have been completed with a total length of 911 feet; five of them are for doubletrack and two for single track. Twenty reinforced concrete box culverts have replaced wooden trestles, - their various dimensions are 3 x 3, 4 x 6, 5 x 5, and 7 x 7, thirteen of them are under double track and seven under single track with a total length for all of 2663 lineal feet.

Besides carrying out the program as outlined in 1918, other improvements have been carried on, such as extensions to station buildings and stock yards, rearrangement of division yards at Hanna and Kindersley, improved water supply at Kindersley, Alsask, Richdale, Rosedale and some other points.

Water - A Railway Necessity

Western Lines Increase Supply

By L.A. Heaman

From Canadian National Railways Magazine, November 1922

To the average traveller, and possibly also to the railway men engaged east of the Manitoba-Ontario Boundary, or west of Edmonton, Alta., the truth of the heading of this article is known, but not appreciated as it is by the inhabitants of the Western Plains.

The railway man in Ontario or in the mountains of British Columbia expects -- and his expectations are rarely disappointed -- to have an ample supply of good water for use at points from 20 to 30 miles apart along the line. The prairie railway man, on the contrary, looks on a supply of water of good quality the same as an Arab does an oasis in the desert, and if limited in quantity conserves it like the desert traveller his scanty reservoirs.

Since the first railways were operated on the Western Prairies the lack of ample supplies of good water has been the most fruitful cause of increased operating costs of any of the local conditions peculiar to these regions.

Large sums have been spent in alleviating, and in many cases, unfortunately, in attempting only to alleviate this condition. Wells both shallow and deep have been dug and driven, some of the latter having been sunk to sea level or into the earth's crust 1800 feet. Waters from rivers, lakes and streams have in many cases been utilized and piped for miles when necessary. Springs have also been developed, and, latterly, valleys dammed, and the waters from spring rains and melting snow impounded to give a year's supply.

It has been found from bitter experience that good supplies from wells are rare, the water when obtained usually carrying in solution either scale forming salts or constituents which on evaporation in the boilers cause foaming. The effect on boilers and incidentally also on operation of the use of water of this character is beyond the scope of this article, but the cost of boiler washouts, scale compounds, boiler and tube renewals, delayed trains, etc. is only too well known to the western railway man, so much so in fact that the word water is often another word for trouble in large doses. Then again rarely do wells furnish an adequate supply even of inferior water.

Rivers, lakes and streams, when their water is of good quality, form ideal supplies, but even these sources cause trouble at times. Rivers carry silt at flood, streams and lakes sometimes dry up, but worst of all, such sources of supply are few indeed compared with the needs in Western Canada. Springs as sources of railway water supplies are comparatively rare, although some exceptionally good supplies are obtained in that way. On the other hand, a year's pumping, or even less, has often transformed a supposedly inexhaustible spring into a bad excuse for an exhausted appropriation and subsequent explanations.

During the last few years in those sections of the country where underground waters are especially poor in quality, and limited in quantity, the Canadian National Railways have been

developing water supplies by impounding water in the spring and conserving it for use during the remainder of the year. The water secured by this means is largely snow water or spring rains, and comparatively free from alkaline or other salts. By selecting for reservoir sites valleys or coulees where the normal stream flow lasts only during the spring run-off or is at all times of fair quality and needs only to be supplemented to provide a good supply, the requisite conditions for a satisfactory water supply are obtained, always providing however a dependable run-off from a water shed not subject to surface contamination or sufficient area to supply a year's requirements of the railway is assured.

Owing to the lack as yet in the Prairie Provinces of reliable stream flow or precipitation data extending over a considerable period there is some uncertainty as to the minimum run-off to be expected from water sheds considered as the sources of water supplies, and reliance on less satisfactory information such as evidence secured from old settlers, employees, etc., has been necessary.

Where investigation has determined that an ample supply of water may be obtained by impounding spring run-off, composed largely of melted snow, and hence of good quality, the valley is dammed if sufficiently deep to by this means impound the water required; at other times storage is secured by a combination of dam and excavated reservoir.

Dams used by the Canadian National in recent work are earthen dams sealed by clay puddle walls carried down below the surface of the valley to an impervious stratum, and bye-passes, if contour of site will allow, are provided clear of the dam. These bye-passes are either of a gradient safe against erosion or are protected with rip rap. Such construction requires practically no maintenance and is permanent. Where such bye-passes are unattainable, spillways, usually of timber, have been constructed in the dams.

The largest single undertaking in providing water supplies during 1921 was the new supply at Melville, Sask., a divisional point on the G. T. P. Railway. This comprised the construction of an earthen dam, with clay puddle wall, 1950 feet long, the excavation of a reservoir for additional storage above the dam, the excavation of a bye-pass 40 feet wide at the bottom and 2000 feet long, the construction of reinforced concrete pump house and 8" cast iron pipe line 2½ miles in length, and the installation of two 36 H.P. crude oil engines and pumps. The excavation in reservoirs and spillway and the material used in constructing dam totalled 315,000 cubic yards. The dam and reservoir will impound 225,000,000 gallons of water, or sufficient allowing for evaporation and other losses to supply 400,000 gallons per day the year round.

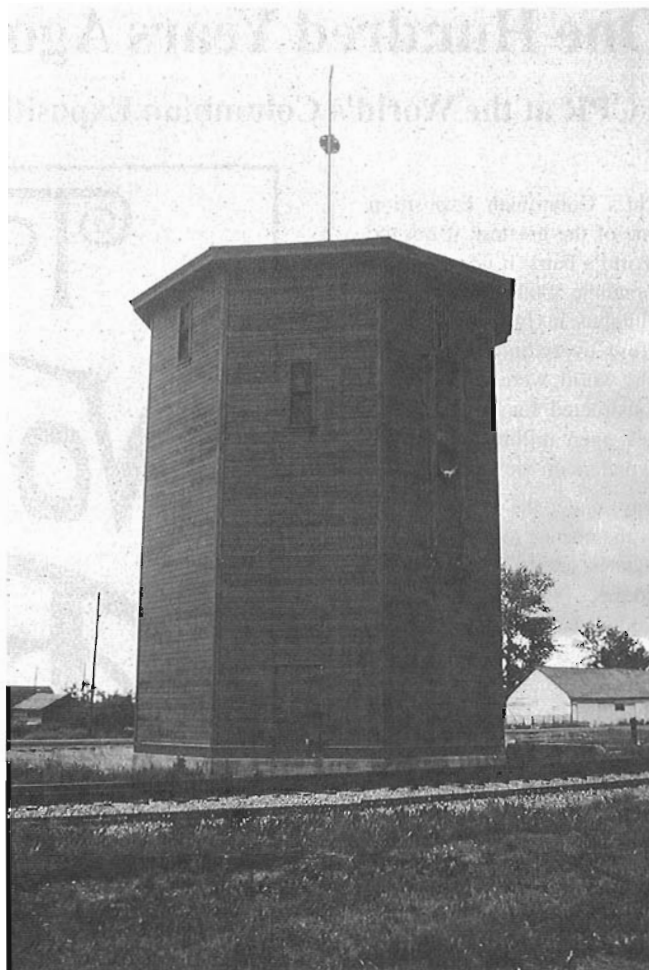
The pumping plant consists of two sets of 36 B. H. P. engines and 8" x 12" horizontal triplex pumps each set delivering 20,500 imperial gallons per hour.

The completion of this undertaking in December 1921, and the unexpected filling of the reservoir owing to unusually heavy fall rains, at once furnished Melville with an abundant supply of excellent water for boiler purposes and rendered further haulage of water by trains unnecessary. It is estimated that the saving in water haulage alone is \$250. per day, besides which an abundant supply is available at the terminal and locomotives leave the terminal with a full tender and the drain on adjacent supplies is reduced so that these are no longer in danger of depletion.

There are many additional savings due to an ample supply of good water at the terminal, on which it is not possible to put an accurate money value.

Water supplies, on Western Lines, obtained by impounding water by dam, or by a combination of dam and excavated reservoir were under construction during 1921 at the following points:

STATION -----	SUBDIVISION -----	CAPACITY OF SUPPLY (IMPERIAL GALLONS)	LENGTH AND SIZE OF C.I.P. LINE
Melville	Miniota	224,711,000	14,560' 6"
Hubbard	Touchwood	23,322,160	1,330' 6"
Paskwegin	Humboldt	14,000,000	900' 6"
Archydal	Riverhurst	7,000,000	161' 6"
Riverhurst	Riverhurst	18,875,000	113' 6"
Ethelbert	Swan River	6,750,000	85' 4"
Kindersley	Hanna	147,748,630	16,118' 6"
Richdale	Hanna	11,750,710	75' 6" W.I.P.
Melfort	Prince Albert	5,200,000	598' 4" W.I.P.
Wiseton	Elrose	12,000,000	1,600' 4"



A typical CN water tank, contained in a wooden structure to insulate the tank from the cold winter winds, and so prevent the water from freezing. This tank is at Wartime, Saskatchewan.

Collection of Douglas N.W. Smith.

At Archydal, Riverhurst and Kindersley reservoirs are complete, pumps are to be installed and pipe line, etc. laid in Spring of 1922.

Other important supplies have been completed at Maymont and Dana. The Maymont undertaking involves the construction of a 6" diameter cast iron pipe line 20,800 feet in length, the installation of a Tangye pumping unit of 36 B. H.P. and the construction of a reinforced concrete pumphouse and an extensive intake in the Saskatchewan River. The pumping head in this supply, including friction in pipe line is 700 feet.

The Dana supply furnishes water to both the Battleford and Cudworth Subdivisions, being located at the diamond crossing of these two subdivisions; with its construction water cars were abandoned on the Battleford Subdivision and when an additional supply is provided on the Cudworth Subdivision the same satisfactory conditions will prevail there.

The source of this supply is springs, which through tests demonstrated that there was sufficient flow to more than furnish the railway requirements. The development of the supply involved

the laying of a 6" diameter cast iron pipe line 20,300 feet long, the construction of concrete pumphouse, suction well, tank, and pumpman's dwelling, and the installation of a 37 H.P. Fairbanks-Morse oil engine with a 7" x 8" Gould Triplex Pump.

It is estimated that \$118,000, per year is saved in operating expenses on the Battleford Subdivision since the Maymont and Dana water supplies have been put in commission.

During 1921 sixty-six water supplies on Western Lines were either constructed, partially constructed or improved.

The improvements in the water situation on Western Lines provided under the 1921 program have so bettered conditions on the main lines that water cars have been practically eliminated. There are, however, certain points where water supplies are still needed, more especially during the fall and winter when grain traffic is heavy, to provide economical operating conditions. It is proposed to provide these additional water supplies as well as to complete all undertakings commenced in 1921 and still uncompleted. The 1922 programme also covered a number of water supplies on Branch Lines.

One Hundred Years Ago

1. The CPR at the World's Columbian Exposition

On May 1 1893 The World's Columbian Exposition opened in Chicago. This fair was one of the greatest, if not the greatest, of the nineteenth century World's Fairs. It was intended to have opened in 1892 to commemorate the 400th anniversary of the "discovery" of America by Columbus in 1492 but, due to numerous delays, it was 1893 before everything was ready. Exhibits of all types, from all over the world, were on display in the many magnificent buildings constructed for the occasion. During the six months the fair was open millions of people travelled great distances to see the wonders on view in Chicago.

The Canadian Pacific Railway, under the Presidency of William C. Van Horne, did not miss the chance to participate. It sent a complete passenger train of the latest and best design, equal to or surpassing anything that had been seen on any North American railways. The Company produced a twelve-panel folder containing information about Chicago and the Fair, as well as how to reach it from points in Maine and New England using the CPR lines between Newport Vermont, via Montreal to Detroit Michigan. A brief description was also given of the company's exhibits:

THE CANADIAN PACIFIC RAILWAY AT THE FAIR--

The Canadian Pacific Railway Company, with its usual desire to bring Canada to the front, has on exhibition in the Transportation Building of the World's Fair, one of its standard trains, consisting of an immense ten wheeled passenger locomotive, baggage car, second-class sleeper, first-class coach, dining car "Savoy", and the first-class sleeper "Satsuma", all manufactured in their Montreal erecting shops. Immediately alongside their train will be found the trains of Great Britain's most prominent railways, showing the difference between the Old and the New World's mode of traveling. Near at hand will also be found handsome models of the Canadian Pacific Railway Trans-Pacific Steamships, unsurpassed to-day on the Pacific waters, and decorating the midway bridge of the building, oil paintings, illustrating Canada's broad prairies and the Canadian Pacific Railway's unsurpassed Rocky Mountain Routes. A descriptive folder of the exhibit will be presented to visitors on the grounds.

The book "A Photographic History of the World's Fair", by James Wilson Pierce, and published in 1893, describes the train as follows:

CANADA'S FINE TRAIN

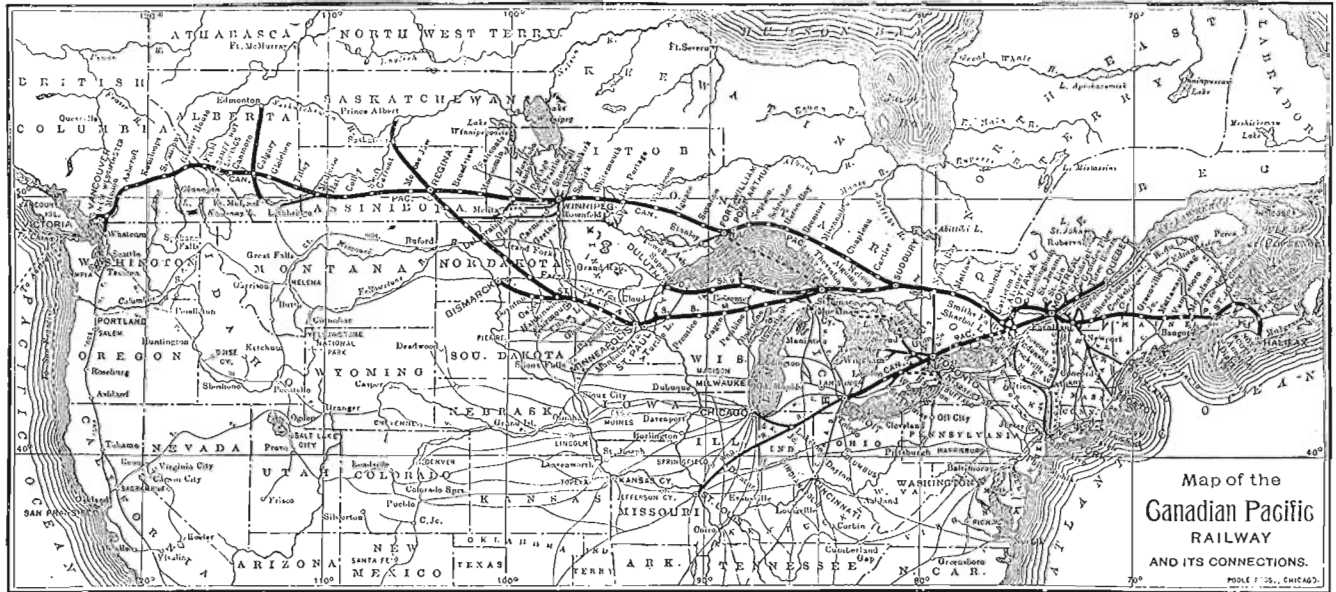
The Canadian Pacific road is represented by a passenger train, with sleeper, first-class day coach, colonists' car, dining and baggage cars, and engine. J.H. Hall, a conductor on the road, is on duty, ready not to punch tickets but to show visitors through the train. All the cars are vestibuled and lighted by electricity. The finish and decoration of the diner is superb. White mahogany, with bronze tablets for ornamentation, with linen, silverware, crystal and china on the spread tables, create a pleasant effect of light and cleanliness. Thirty persons can be seated at the tables. The

TO THE
WORLD'S
FAIR
Chicago
BY THE
CANADIAN
PACIFIC
RAILWAY

D. MCNICOLL, General Passenger Agent, MONTREAL.
C. E. E. USSHER, Asst. General Passenger Agent, MONTREAL.
C. E. MCPHERSON, Asst. General Passenger Agent, Atlantic Division, etc., ST. JOHN, N. B.
H. J. COLVIN, New England Passenger Agent, 197 Washington Street, BOSTON.

FOLDER A

*The cover of the 1893 CPR World's Fair folder.
 Collection of Fred Angus.*



ABOVE: The CPR system map on the 1893 flyer. This showed the connections by which one could use CP's lines to reach the World's Fair. BELOW: The schedules from Maine to and from the 1893 World's Fair.

CANADIAN PACIFIC RAILWAY			
MAINE TO CHICAGO.			
STATIONS FROM	RAILWAY.	CHICAGO EXPRESS.	WORLD'S FAIR EXPRESS.
Oldtown.....Lv.		5.50 a m	6.30 p m
Bar Harbor.....			3.00 p m
Ellsworth.....			5.05 p m
Bangor.....		7.20 a m	8.00 p m
Foxcroft.....		7.05 a m	4.25 p m
Belfast.....	Maine	7.20 a m	3.65 p m
Pittsfield.....		8.36 a m	9.13 p m
Skowhegan.....		8.35 a m	
Waterville.....	Central.	5.30 a m	9.25 a m
Winthrop.....		6.27 "	10.22 "
Lewiston.....		7.20 a m	11.10 a m
Augusta.....		6.25 a m	10.10 a m
Rockland.....			8.25 a m
Bath.....		7.15 a m	10.55 a m
Brunswick.....		7.40 a m	11.40 a m
Old Orchard.....	B. & M.	7.32 a m	*7.15 p m
Portland.....		8.45 a m	*8.15 p m
Bartlett.....	Me. Ctl.	11.50 a m	*10.35 p m
Fabyans.....		12.50 p m	*11.30 p m
St. Johnsbury.....		3.13 "	*2.22 a m
Newport.....	B. & M.	4.45 "	*3.65 "
Montreal, Windsor St.....Ar.		8.25 p m	*7.30 a m
Montreal, Windsor St.....Lv.	Canadian	*9.00 p m	8.25 a m
Montreal Jct.....		*9.12 p m	8.37 a m
Toronto.....	Pacific.	*7.00 a m	7.00 p m
St. Johnsbury.....Lv.		*7.20 a m	7.20 "
Detroit, Fort St.....Ar.		*2.30 p m	*2.30 a m
Englewood.....		*3.65 "	*1.50 "
Chicago, Dearborn St.....Ar.	Wabash.	*9.50 "	*9.45 "
		*10.15 "	*10.10 "

sleeping-car is a model of comfort, of the type familiar to all travelers, but brought up to date by modern improvements. The finish of the first-class day coach is in quarter-sawed oak, the seats having backs arranged rather for comfort than economy of space. The car is divided into three sections by two arches, which create an impression of spaciousness foreign to cars of the usual pattern. There are two smoking compartments, one at either end of the car, and the usual toilet conveniences. In the colonists' car, what is called in this country [the U.S.A.] an emigrants' sleeper, many improvements are found. The seats are comfortable and the beds furnished with good bedding. In finish and decoration the car is superior to many first-class day coaches. All the cars are finished without and within with oil and varnish, no paint being used in any

CHICAGO TO MAINE.			
STATIONS TO	RAILWAY.	MAINE EXPRESS.	EASTERN EXPRESS.
Chicago, Dearborn St.....Lv.	Wabash.	*2.30 p m	*10.30 p m
Englewood.....		*2.55 "	*10.55 p m
Detroit, Fort St.....Ar.	Canadian	*10.60 "	*7.15 a m
Toronto.....Lv.		*11.05 p m	12.10 p m
Montreal Jct.....	Pacific.	*12.05 a m	1.10 "
Montreal, Windsor St.....Ar.		*8.10 "	8.55 "
Montreal, Windsor St.....Lv.		8.30 p m	*9.10 p m
Montreal Jct.....		7.07 p m	*7.30 a m
Montreal, Windsor St.....Lv.	B. & M.	7.20 p m	*7.40 a m
Newport.....		*8.20 p m	9.00 a m
St. Johnsbury.....		*12.16 a m	12.48 p m
Fabyans.....		*1.40 "	2.34 "
Bartlett.....	Maine	*1.50 "	4.45 "
Portland.....Ar.	Central.	*6.05 "	5.40 "
Old Orchard.....	B. & M.	*8.25 a m	7.45 p m
Brunswick.....		*9.37 a m	8.35 p m
Bath.....		11.18 a m	*12.25 a m
Rockland.....		11.48 a m	1.00 a m
Augusta.....		7.40 a m	4.05 a m
Lewiston.....		12.35 p m	*2.03 a m
Winthrop.....		9.05 a m	*1.25 a m
Waterville.....	Maine	11.02 "	
Skowhegan.....		11.58 a m	*3.00 a m
Pittsfield.....	Central.	5.10 p m	7.00 a m
Belfast.....		5.19 p m	*3.47 a m
Foxcroft.....		6.30 p m	9.25 a m
Bangor.....		6.40 p m	9.25 a m
Ellsworth.....		6.30 p m	*5.05 a m
Bar Harbor.....		8.20 p m	*8.25 a m
Oldtown.....Ar.		9.25 p m	*10.15 a m
		8.13 p m	*6.23 a m

Trains unless otherwise marked run week days only. *Daily Sundays included.
 †Daily, except Mondays.
 Chicago Express.—Parlor Car Portland to Montreal, connecting with through Sleeper Montreal to Chicago. Through sleeping car berths sold.
 World's Fair Express.—Sleeping Car Portland to Montreal, connecting with through Sleeper Boston to Chicago. Through berths to Chicago sold.
 Tourist Car Portland to Chicago Tuesdays.
 Maine Express.—Sleeping Car Chicago to Boston, connecting Montreal Sleeper, to Portland. Through berths sold. Tourist Car Chicago to Portland Thursdays.
 Eastern Express.—Sleeping Car Chicago to Montreal, connecting with Parlor Car Montreal to Portland. Through berths sold.
 For meals, same footnote will apply as for Boston trains, pages 87-88.
 Time of connections with foreign lines not guaranteed.

form. This is a specimen train, being a duplicate of those now in service on the road. Each of the cars are 14 feet 10 inches high by 10 feet 3 1/2 inches wide. The sleeper is 78 feet long, and weighs 98,000 pounds. The locomotive is known as a ten-wheel engine. It weight 106 1/2 tons when loaded, and the cylinders are 19 X 24 inches. Steam from the boiler heats the train, and the customary bell cord is replaced by a pneumatic device. Electricity is provided from storage batteries, charged before the train starts.

CANADIAN PACIFIC RAILWAY

CHICAGO TO NEW ENGLAND.

STATIONS TO	RAILWAY.	NEW ENGLAND EXPRESS.	EASTERN EXPRESS.
Chicago, Dearborn St. Lv.	Wabash.	*2.30 p m	*10.30 p m
Englewood		*2.55 "	*10.55 p m
Detroit, Fort St.	{	Central Time . Ar.	*10.50 "
		Central Time . Lv.	*11.05 p m
		Eastern Time . Lv.	*12.05 a m
London	Canadian	*3.45 "	4.50 "
Toronto		8.30 a m	*9.10 p m
Montreal Jct Ar.	Pacific.	7.07 p m	*7.30 a m
Montreal, Windsor St. Ar.		7.20 p m	*7.40 a m
Montreal, Windsor St. Lv.	Pacific.	*8.20 p m	9.00 a m
Montreal Jct		*8.32 "	9.12 "
Richford	Boston & Maine.	*10.55 p m	11.34 "
Newport, Vt		*12.00 m't	12.40 p m
Lyndonville Ar.	Boston & Maine.	*12.10 a m	12.48 "
St. Johnsbury		*1.18 "	1.57 "
Wells River	Boston & Maine.	*1.40 "	2.20 "
Newbury		*2.20 a m	2.55 "
Bradford	Boston & Maine.	10.06 a m	7.15 p m
No. Theford		10.24 "	7.34 "
Norwich	Boston & Maine.	10.53 "	8.03 "
Woodsville		11.20 a m	8.30 p m
Bath	Concord & Montreal.	*2.30 a m	3.05 p m
Lisbon		7.11 a m	3.48 p m
Littleton	Concord & Montreal.	7.23 "	4.00 "
Lancaster		7.48 "	4.24 "
Haverhill, N.H.	Concord & Montreal.	10.35 a m	5.20 p m
Warren		*2.48 a m	
Wentworth	Concord & Montreal.	*3.18 "	
Plymouth		*3.25 "	
Ashland	Concord & Montreal.	*3.56 "	4.15 p m
Meredith		*4.07 "	
Weirs	Concord & Montreal.	*4.24 "	
Lakeport		*4.32 "	4.57 "
Laconia	Concord & Montreal.	*4.44 "	
Tilton		*4.49 "	5.10 "
Franklin	F. & T.	6.50 a m	7.00 p m
Concord	C. & M.	*5.40 a m	6.05 p m
Hillsboro	Boston & Maine.	9.45 a m	
Bennington		10.35 "	
Harrisville	Boston & Maine.	11.30 "	
Keene		11.55 a m	
Warner	Boston & Maine.	7.30 a m	
Bradford		9.00 "	
Newbury	Boston & Maine.	9.35 "	
Newport, N.H.		11.15 a m	
Manchester	C. & M.	*6.19 a m	6.31 p m
Nashua Jct.	C. & M.	*6.50 a m	7.00 p m
Portsmouth	C. & M.	10.10 a m	
Lawrence	Boston & Maine.	7.25 a m	11.40 p m
Dover		12.50 "	
Haverhill	Boston & Maine.	8.10 a m	12.31 a m
Oakdale		8.52 a m	
Worcester	B. & M.	9.20 "	
Woonsocket		10.32 "	
Pawtucket	N. Y. P. & B.	10.52 "	
Providence		11.02 a m	
Lowell	Boston & Maine.	*7.18 a m	7.25 p m
Boston		*8.02 a m	8.10 p m
Lynn	Boston & Maine.	8.40 a m	9.52 p m
Salem		8.52 a m	10.05 p m
Newburyport	Boston & Maine.	10.27 a m	12.35 a m
Mansfield		9.35 a m	11.45 p m
Taunton	Old Colony.	10.25 a m	12.05 a m
Brockton		9.36 a m	10.58 p m
Middleboro	Old Colony.	10.02 a m	
Providence		10.05 a m	12.20 a m
New Bedford	Old Colony.	11.05 a m	12.45 a m
Fall River		10.25 a m	12.45 a m
Newport, R.I. Ar.	Wabash.	11.05 a m	

Trains not otherwise marked week days only. *Daily Sundays included.
New England Express.—Through Sleeping Car Chicago to Boston. Saturdays Sleeper remains over Toronto Sundays till 9.10 P.M. Tourist Cars, Chicago to Boston, leave Wednesdays, Fridays, and Sundays. Dining Car, Supper west of Detroit, breakfast Toronto Station, dinner and supper Dining Car east of Toronto.
Eastern Express.—Sleeping Car Chicago to Montreal connecting with Sleeping Cars Montreal to Boston. Through Sleeping Cars berths sold. Breakfast Detroit Station, dinner and supper Dining Car east of Detroit, breakfast and dinner Dining Car south of Montreal.
 Time of and connections with foreign lines not guaranteed.

CANADIAN PACIFIC RAILWAY

NEW ENGLAND TO CHICAGO.

STATIONS FROM	RAILWAY.	CHICAGO EXPRESS.	WORLD'S FAIR EXPRESS.
Newport, R.I. Lv.	Wabash.		2.55 p m
Fall River			4.55 p m
New Bedford	Old Colony.	5.30 a m	
Taunton		5.25 a m	3.40 p m
Providence	Old Colony.	6.10 a m	6.10 p m
Middleboro		*6.15 a m	6.20 p m
Brockton	Old Colony.	6.15 a m	5.53 p m
Mansfield		7.19 a m	6.26 p m
Newburyport	Boston & Maine.	7.30 a m	6.40 p m
Salem		7.00 a m	5.40 p m
Lynn	Boston & Maine.	7.48 "	7.05 "
Boston		8.25 a m	6.58 p m
Lowell	Boston & Maine.	9.00 a m	8.00 p m
Providence		9.45 a m	8.43 p m
Pawtucket	N. Y. P. & B.	6.45 a m	4.20 p m
Woonsocket		6.54 "	4.30 "
Worcester	Boston & Maine.	7.16 "	4.55 "
Oakdale		8.07 "	6.25 "
Haverhill, Mass.	Boston & Maine.	8.30 a m	6.59 p m
Dover		8.30 a m	6.45 p m
Lawrence	Boston & Maine.	6.55 "	4.30 "
Portsmouth		8.45 a m	7.05 p m
Nashua Jct.	Concord & Montreal.	8.30 a m	5.15 p m
Manchester		10.12 a m	*9.07 p m
Newport, N.H.	Concord & Montreal.	10.41 a m	*9.37 p m
Newbury		8.18 a m	5.28 p m
Bradford	Boston & Maine.	8.44 "	6.35 "
Warner		9.00 "	7.15 "
Keene	Boston & Maine.	9.22 a m	8.15 p m
Harrisville		7.15 a m	2.55 p m
Bennington	Boston & Maine.	7.41 "	3.18 "
Hillsboro		8.25 "	4.00 "
Concord	C. & M.	8.50 a m	4.40 p m
Franklin		11.20 a m	*10.10 p m
Tilton	F. & T.	11.25 a m	6.25 p m
Laconia	Concord & Montreal.		*10.35 p m
Lakeport		12.06 p m	*11.07 "
Weirs	Concord & Montreal.	12.10 "	*11.12 "
Meredith		12.23 "	*11.22 "
Ashland	Concord & Montreal.	12.31 "	*11.30 "
Plymouth		12.45 "	*11.47 p m
Wentworth	Concord & Montreal.	1.10 "	*12.03 a m
Warren		1.38 "	*12.32 a m
Haverhill, N.H.	Concord & Montreal.	2.05 p m	*12.39 "
Lancaster		7.25 a m	*1.09 a m
Littleton	Concord & Montreal.	7.25 a m	7.10 p m
Lisbon		8.45 "	11.20 p m
Bath Lv.	Concord & Montreal.	9.09 "	11.43 p m
Woodsville Ar.		9.21 a m	11.57 p m
Norwich Lv.	Boston & Maine.	2.20 p m	*1.25 a m
No. Theford		8.10 a m	5.45 p m
Bradford	Boston & Maine.	8.41 "	6.11 "
Newbury, Vt.		9.13 "	6.38 "
Wells River	Boston & Maine.	9.32 a m	6.55 p m
St. Johnsbury		2.30 p m	*1.35 a m
Lyndonville	Boston & Maine.	3.08 "	*2.22 "
Newport, Vt.		3.25 "	*2.38 "
Richford	Canadian	4.35 "	*3.45 "
Montreal Jct Ar.		4.45 "	*3.55 "
Montreal, Windsor St. Ar.	Canadian	5.54 "	*5.00 "
Montreal, Windsor St. Lv.		8.12 "	*7.19 "
Montreal Jct	Pacific.	8.25 p m	*7.30 a m
Toronto		*9.00 p m	8.25 a m
London	Pacific.	*9.12 p m	8.37 a m
Detroit, Fort St.		*7.20 a m	7.20 p m
Englewood Ar.	Wabash.	*11.05 a m	11.05 p m
Chicago, Dearborn St. Ar.		11.05 a m	11.05 p m

Trains not otherwise marked run week days only. *Daily Sundays included.
 †Daily, except Monday.
Chicago Express.—Sleeper Boston to Montreal, connecting with through Sleeping Car Montreal to Chicago. Through berth tickets sold from Boston. Dining cars, Dinner 5.30 P.M. South of Montreal, Breakfast and Dinner West of Toronto, and Supper West of Detroit.
World's Fair Express.—Through Sleeper Boston to Chicago. Saturdays Sleeper remains over in Montreal Sundays till 9 P.M. Tourist Cars Boston to Chicago Mondays, Wednesdays and Fridays. Dining Car, Breakfast and Lunch West of Montreal, Supper, Toronto Station, Breakfast Dining Car East of Chicago. Time of and connections with foreign lines not guaranteed.

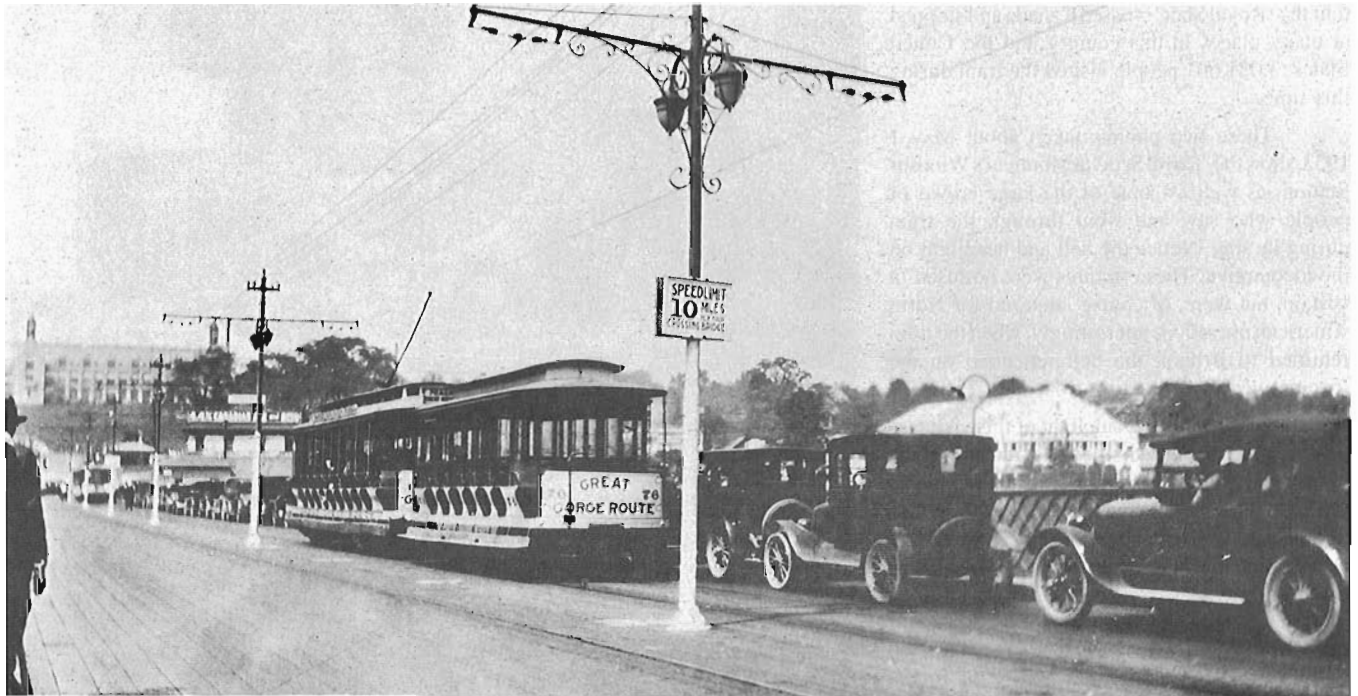
From New England to Chicago and return by the CPR lines as promoted in the flyer issued in 1893.

2. The Opening of the Niagara Falls Park and River Railway, May 24 1893

May 24 1893 saw the inauguration of service of the electric railway from the docks at Queenston, Ontario, up the escarpment at Queenston Heights to Queen Victoria Park at Niagara Falls. This company received its franchise on December 4 1891 and construction began in 1892. Despite problems in obtaining sufficient power to run the car up the steep grade up Queenston Heights, the line opened on schedule, on Queen Victoria's birthday, and later the same year was extended to Chippewa. In 1895 an electric line was built down the Gorge on the United States side of the river and, in 1898, the two systems were connected by the newly completed

arch bridge just below the Falls. In July 1899 the completion of the suspension bridge between Queenston and Lewiston allowed a circular tour, and for more than thirty years thereafter the "Great Gorge Route" was one of the attractions of the Niagara Falls area. Despite two serious accidents, as well as rock slides in the Gorge, the line continued in operation until September 10 1932 when it was abandoned.

A detailed feature article on the "Great Gorge Route" is in preparation and is scheduled for publication in Canadian Rail early in 1994.

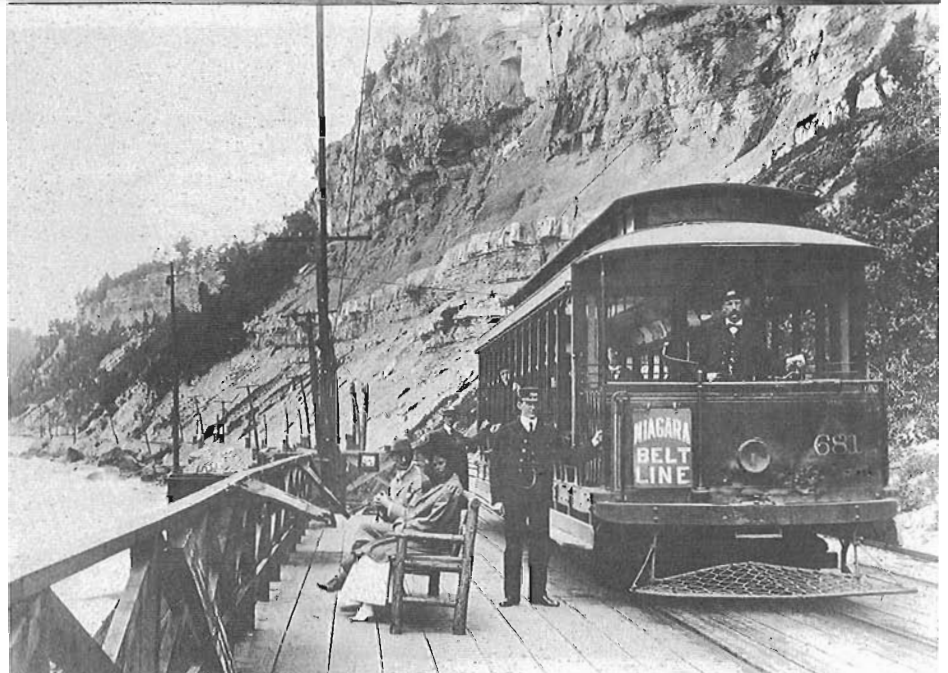


ABOVE. Crossing the arch bridge at Niagara Falls looking towards the Canadian side, in the early 1920's. Note the sign reading "4.4% Canadian Ale and Beer". This was a great attraction since at that time there was prohibition in the U.S.A.

National Archives of Canada, Merrilees Collection, photo PA-166519.

RIGHT: International Railway Co. car 681 at Whirlpool station in the Niagara Gorge (U.S. side) about 1910.

National Archives of Canada, Merrilees Collection, photo PA-166482.



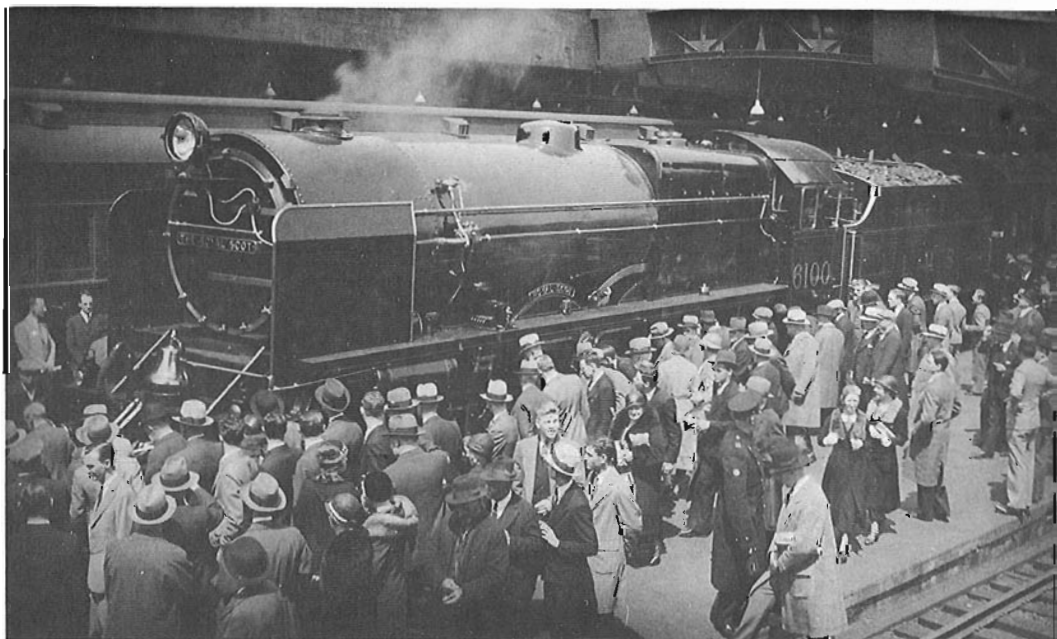
Sixty Years Ago

The Royal Scot in Canada

In 1933 the world was in the depths of the Great Depression and there were few happenings which gave cause for optimism about the future. One such rare happy occurrence was the visit, from Great Britain, of London Midland & Scottish locomotive 6100 "Royal Scot" and its train en route to the "Century of Progress" World's Fair in Chicago. During its 11,194-mile, 5-month tour the "Royal Scot" crossed Canada and stopped at many places in this country and the United States. 3,021,601 people visited the train during this time.

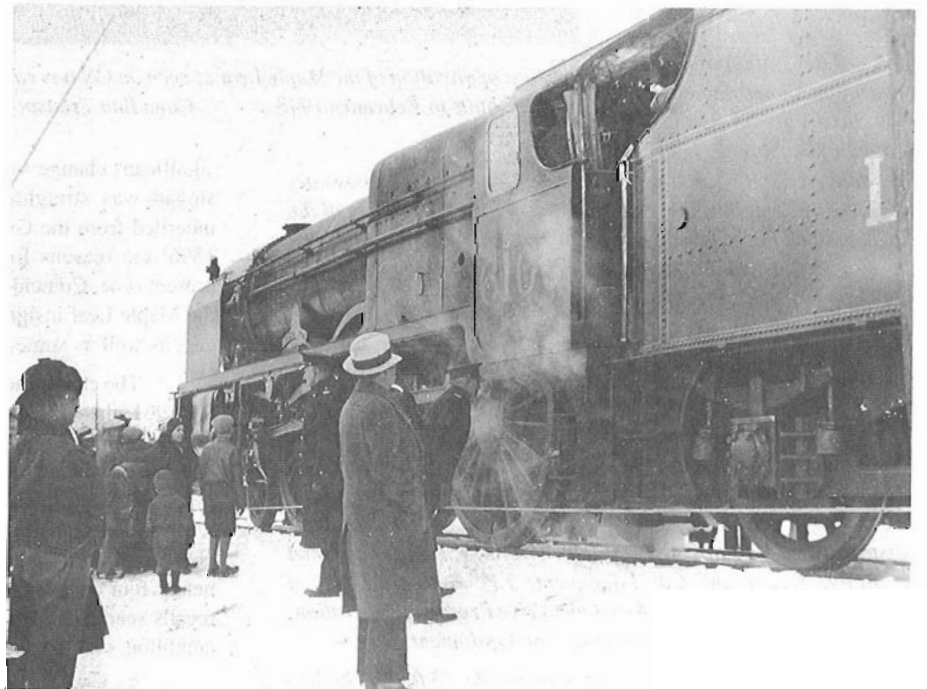
These two photos, taken about May 1 1933, show the "Royal Scot" at Montreal's Windsor Station, as well as some of the large crowd of people who saw and went through the train during its stay. Notice the bell and headlight on the locomotive. These fixtures were not used in Britain, but were, of course, required for North American operation. Interestingly, when the train returned to Britain, the bell remained on the locomotive; a presentation from the CPR.

One interesting sidelight of this visit was that the modern curved-sided cars impressed the management of the Canadian Pacific Railway so much that their next passenger cars, the lightweight high speed cars constructed in 1936, were also curved-sided. This feature became typical of lightweight CPR passenger cars built from then until the early 1950's. Thus the long-ago visit of the "Royal Scot" left a lasting legacy to the railways of Canada.





These two photos, from the collection of Tom Wash, show the "Royal Scot" at Kingston, Ontario on a snowy day, November 11 1933, as the train neared the end of its long tour.



Fifty Years Ago

The CNR Maple Leaf First Appears on Railway Rolling Stock

By Fred Angus

Fifty years ago a famous emblem first appeared in Canada. This was the CNR Maple Leaf which, together with the CPR Beaver, must rank as the finest insignia ever used on Canada's railways. It was in the deepest days of World War II, May 1943, that Canadian National Railways announced that a new symbol would appear on its freight cars; the maple leaf with the initials C N R and the tilted wafer bearing the proud slogan "Serves All Canada". Previous to this, the name of the railway had appeared in simple block letters on the car sides. The magazine "Canadian Transportation" (successor to the "Canadian Railway and Marine World" and the earlier "Railway and Shipping World") described the innovation as follows in its issue for May, 1943:

NEW DRESS FOR C.N.R. BOX CARS

The accompanying illustration shows one end of a new box car on Canadian National Rys., this car being the first delivered out of an order for 1,100 all-steel, 40-ton box cars placed with Canadian Car and Foundry Co., Ltd. The body of the car is painted in the standard box car red, with a maple leaf, and the slogan "Serves All Canada", prominently superimposed in white. The car lettering, numbering and specifications are in white also.

The red in which the car body is finished has been extended to the trucks, wheels and all underslung equipment, previously painted in black.

When the first of the new box cars was delivered in Montreal, it was inspected at the Bonaventure station by a group of C.N.R. officers, including N.B. Walton, Executive Vice President; Alistair Fraser, K.C., Vice President, Traffic; E.R. Batley, Chief of Motive Power and Car Equipment; J.P. Johnson, Chief of Transportation; F. Simpson, Assistant to Vice President, Operation; and G.E. McCoy, Assistant Chief of Car Equipment.

The new cars are 40 ft. 6 in. long inside, 13 ft. 8 in. high to eaves, 10 ft. wide at eaves and with extreme width of 10 ft. 3 in., 9 ft. 2 in. wide inside and 10 ft. high inside. Capacity is 3,712 cu. ft.



The first application of the Maple Leaf as seen on CN box car number 480715 built in February 1943. Canadian Transportation.

Advice received since the foregoing was written is to the effect that the slogan shown in the accompanying illustration will be placed on approximately 100 cars, and that very probably similar slogans will be used on other cars. In future, all box cars going through the paint shop will be painted red, including the trucks, wheels and all underslung equipment. Decision as to display of a slogan on repainted cars will be made later.

The maple leaf insignia was a success and was used on very many CN freight cars, diesel locomotives and, later, passenger cars, over the years. Various modifications were made from time to time, including the changing of the colour of the maple leaf from white to green. Some experimenting with the slogan was also done as the words "Canada's Largest Railway" appeared on the maple leaf for a time in the mid-1940's; however the slogan "Serves All Canada" emerged as the standard.

In the mid-1950's a significant change was made when the tilted wafer bearing the slogan was straightened up. The tilted wafer was a symbol inherited from the Grand Trunk and dated back at least as far as 1896; the reasons for its original adoption are not clear at the present time. Coincidentally with the "straightening" of the wafer, the Maple Leaf insignia began to be applied to the new passenger cars as well as some of the larger steam locomotives.

The end of the application of the Maple Leaf came in 1960 and 1961 when CN adopted its new symbol, still in use, affectionately known as the "Wiggle Worm" or the "Wet Noodle". Gradually, as cars were repainted or retired, the Maple Leaf became rarer and rarer. However it is not yet gone; even after more than thirty years it can still be seen throughout the system, sometimes in remarkably good condition. Even examples of the tilted wafer, out of use for nearly four decades, still are seen from time to time. Your editor recalls seeing, in April 1993, a Maple Leaf insignia, in excellent condition, on a box car used in tool service in Kitchener, Ontario.

So here's to the CN Maple Leaf on its 50th anniversary, and may it continue to be seen throughout North America for years to come.

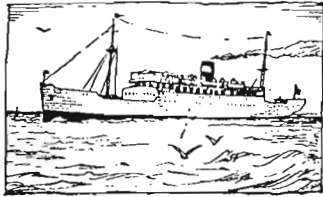
The Railway and the War

By Thurstan Topham

Concluding this series

Steamship Lines owned and operated by the Canadian railways have played a vital part in the war effort of the United Nations

Two of the famous West Indies luxury liners were among the ships of the Canadian National Steamships fleet which fell victim to the treacherous Axis U-boats.

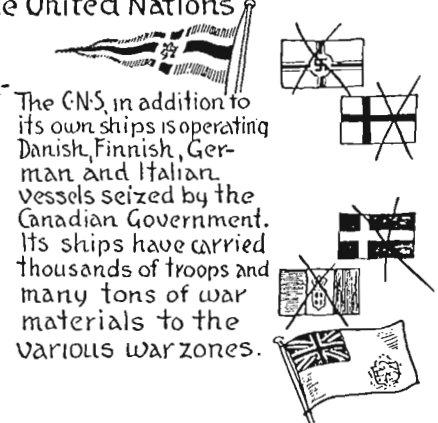
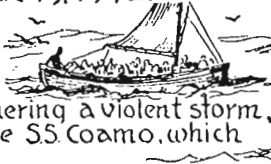


The Lady Somers, requisitioned for War Service, was sunk in action in the Mediterranean on July 15, 1941, while serving as an auxiliary cruiser.



The Lady Hawkins was torpedoed and sunk without warning at dead of night in the Atlantic on Jan. 19, 1942.

Chief Officer P.A. Kelly, in charge of one of the Lady Hawkins lifeboats containing 72 passengers and crew sailed his boat for five days, weathering a violent storm, before being picked up by the SS Coamo, which took the survivors to port.



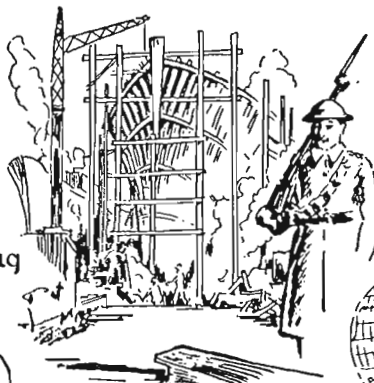
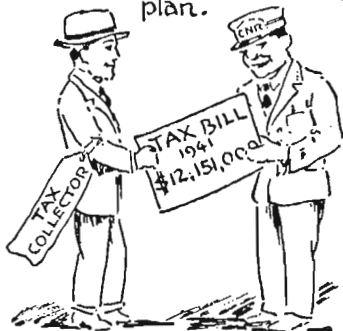
The C.N.S. in addition to its own ships is operating Danish, Finnish, German and Italian vessels seized by the Canadian Government. Its ships have carried thousands of troops and many tons of war materials to the various war zones.



No chances were taken by Chief Officer Kelly. Although the lifeboat's stores would have lasted two weeks more he carefully rationed the food, doling out the condensed milk in the cup-like bottom of a flash-light - the "silver service" the survivors called it.

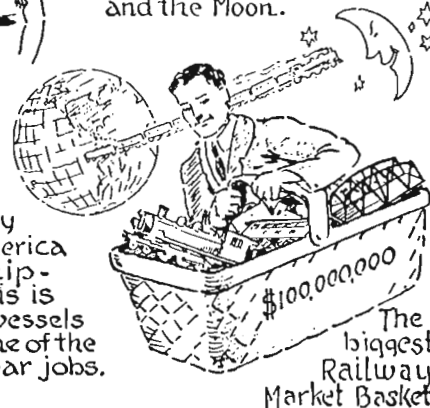
Canada's stupendous war effort makes increasing demands on Canadian transportation, and the railways are now purchasing huge quantities of supplies and equipment to "keep 'em rolling for Victory."

The tax bill paid by the C.N.R. in a single year (Federal, Municipal, and Sales Taxes) would build more than 5,000 workers homes under the Wartime Housing plan.



The C.N.R. is the only railway in North America which operates a ship-building yard. This is turning out naval vessels and cargo ships - one of the many big railway war jobs.

In 1941 the C.N.R. purchased goods to the value of 100 million dollars. To pay for this the Railway had to haul 100 tons of freight 9 billion miles, equivalent to 18,000 round trips between the Earth and the Moon.



The biggest Railway Market Basket

Photo Gallery

With this issue of "Canadian Rail", we are inaugurating a new section which will appear at irregular intervals. Its purpose is to highlight photographs from the collection of one member. To launch this new section, your editors are most pleased to be able to feature photographs submitted by Dick George. Mr George and his friend Allan Paterson have jointly developed a large photographic collection which many authors have drawn upon to illustrate numerous articles and books. In 1988, Boston Mills Press published their photographic memoir, "Steam At Oakville: A Day on the Oakville Subdivision".

For this new section to be a success, we rely upon our membership for submissions. You are encouraged to submit a selection of black and white photos of historic and/or current subjects for consideration. Prints should be 8 X 10 inches for best reproduction.



ABOVE: Italy Yard in St Albans, Vermont lies at the foot of steep grade. In this view taken on October 18, 1950, S2 #7919 gives a southbound freight a helping assist. The #7919, which was built by American Locomotive Works for the Central Vermont Railway in 1942, sported an all black paint scheme relieved only by the CV herald on the side of the cab. The roof of the CV backshop and roundhouse complex is behind the wooden coaling tower

OPPOSITE TOP: CN F3A #9000 was first new road diesel to be delivered after World War II. It arrived on the property in May 1948. The number commemorated CN's first experimental road diesel which had been built by the Canadian Locomotive Works at Kingston, Ontario in 1928. In this view the #9000 and an unidentified F3B hustle a large freight train westward through Ste Anne de Bellevue, Quebec.

OPPOSITE BOTTOM: Its paint scheme gleaming in the sunlight, FA-2 #4093 and an unidentified sister unit head up a section of time freight #953 near Kenora, Ontario in this circa 1953 view. This view clearly shows the CPR practice of running on the left hand main track, between Fort William (now Thunder Bay) and near Winnipeg. The semaphores which protect train operation have now vanished from the Canadian railway scene as has the FA's themselves. Delivered to Canadian Pacific on October 30, 1953, the #4093 was retired in 1977.



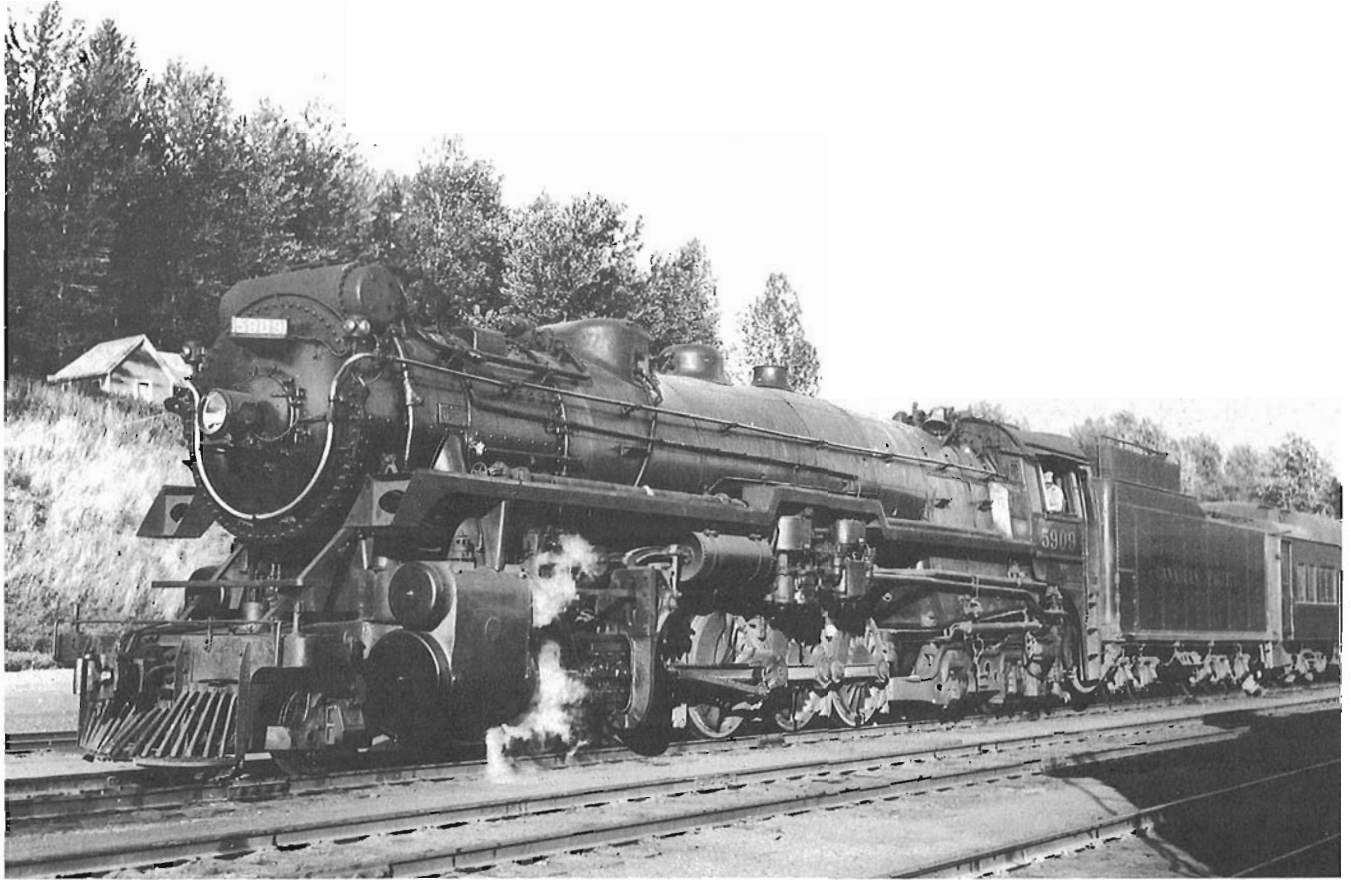


ABOVE: Trailing ten cars evenly split between headend traffic and coaches, FA-2 #4082 leads CP Train 741 on May 24, 1955. With a 1300 departure time from Toronto, the train is due at Buffalo, New York at 1635. At Buffalo, passengers will change trains to make connections with NYC Train 52, "The Easterner", which departed for New York City at 1655 and with Train 51, "The Empire State Express" for Cleveland, Ohio at 1705. The train consist is a mixture of Canadian Pacific, New York Central and Toronto, Hamilton & Buffalo Line cars. This reflected the corporate ownership of the three rail lines over which Train 741 operated. The #4082 was turned out of the Montreal Locomotive Works in August 1953.

OPPOSITE TOP: The delivery of fifteen RS11's to the Duluth, Winnipeg & Pacific in August and September 1956 ended the steam era on this CN subsidiary. Ironically, photographer Dick George took this photo while returning from a trip to Manitoba to record the vanishing steam locomotive. In this view showing an extra freight running south from Virginia to Duluth, Minnesota, unit #3605 leads sister engines #3608 and #3609.

OPPOSITE BOTTOM: Due to steep grades west and north of Toronto, CP often employed helper units to assist through freight trains over these obstacles. During the transition from steam to diesel, it was usually a steam engine which acted as the helper unit. In this rather unusual view taken at Hornby on October 7, 1959, SW-1200 #8146 is "assisting" 2-8-2 #5118 from Toronto to Orr's Lake where it will be cut-off the train. The #8146 had been delivered to CP on May 28th of that year which saw the end of steam on CP's main line freight trains. In contrast to the new diesel, the #5118 had almost fifty years of service when it was photographed. It was built in Canadian Pacific's Angus Shops in 1912.

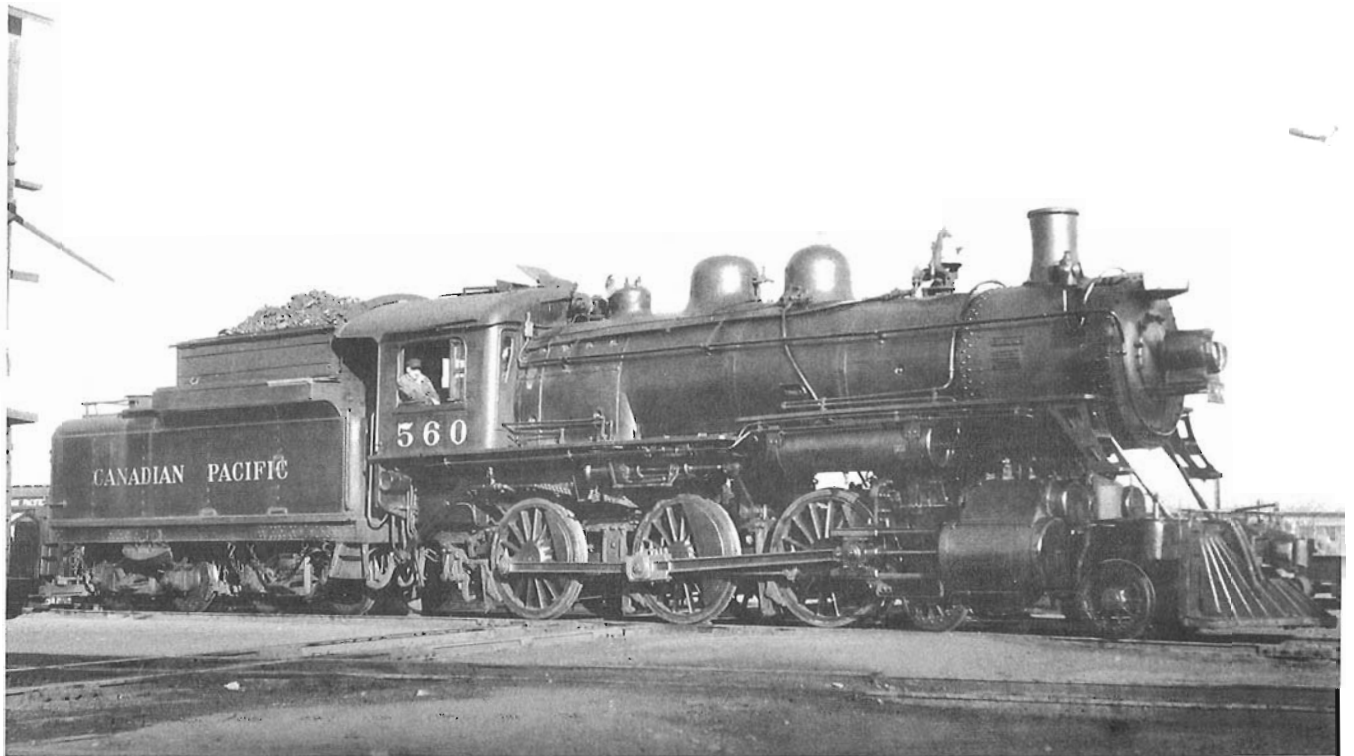




ABOVE: To cope with longer and heavier passenger and freight trains through the steeply graded Rocky Mountains, CP's mechanical officers designed the T1A class 2-10-4 locomotive. The seventeen engines of this class were turned out in August and September of 1929. Early victims of dieselization, all the T1A's were reired during 1956. In this circa 1938 view taken at Revelstoke, the #5909 heads up what is believed to be Train #7, "The Dominion", which was then the premier transcontinental train linking Montreal to Vancouver.

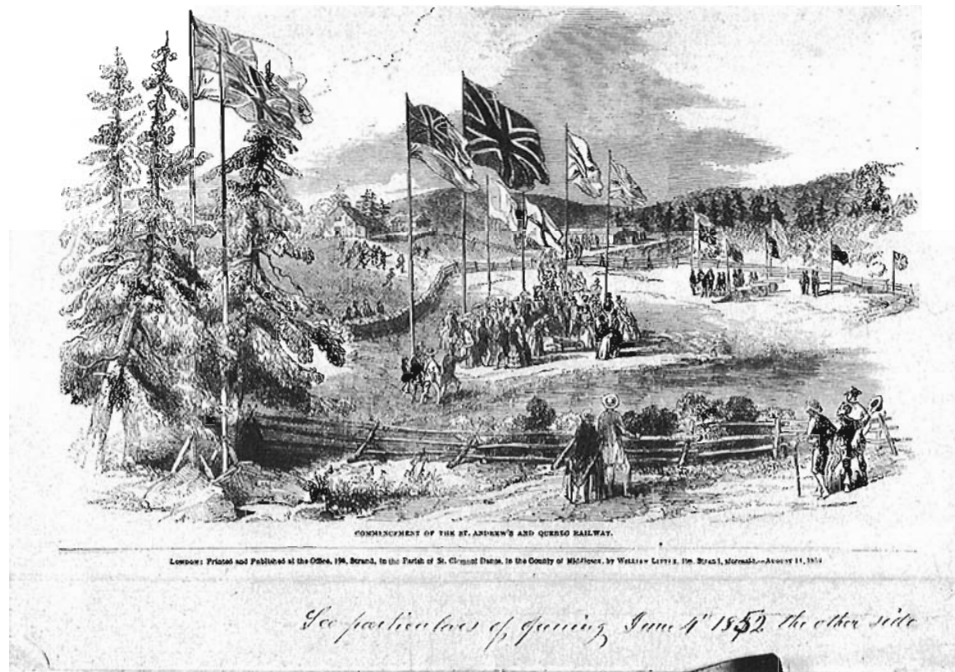
OPPOSITE: CP owned more ten-wheelers than any other type of steam locomotive. Faced with an expanding branch line network and burgeoning grain shipments in the west, CP placed large orders for this type of locomotive during the early years of this century. As the Canadian locomotive building facilities were completely filled with orders, CP turned to foreign manufacturers who supplied CP with 120 ten-wheelers between November 1902 and December 1903. The Schenectady Locomotive Works in Schenectady, New York provided 63, the North British Locomotive Company of Glasgow, Scotland delivered 26, and the Saxon Locomotive Building Company of Germany shipped 31. This was the last time that CP placed such a large order with foreign builders. Shortly after 1903, CP completed its new Angus Shops and private interests erected the Montreal Locomotive Works.

The 560 was one of the 63 engines turned out by Schenectady. It spent most of its operating life in western Canada being assigned variously to Winnipeg, Ogden, Cranbrook, and Coquitlam. The classic rods-down "roster type" view (top) was taken in Vancouver on May 7, 1939. The other view (bottom) shows the #560 on a short mixed train in the Vancouver area on May 13, 1938. At this time, CP operated two mixed train services in the greater Vancouver area; a daily except Sunday round trip between Vancouver and Huntingdon and two and a half daily round trips between Coquitlam and New Westminster. Huntingdon served as CP's connection to the Northern Pacific and Milwaukee Road. As the mixed train is composed almost entirely of CP cars, it is most likely that the train pictured is one of the Coquitlam-New Westminster mixed trains.



Rail Canada Decisions

By Douglas N.W. Smith



The sod turning ceremony of the St. Andrews and Quebec Railway on June 4 1852, as published in the Illustrated London News. New Brunswick Museum.

EARLY NEW BRUNSWICK LINE TO GO

On February 2, 1993, CP received permission from the Agency to abandon two short sections of line in New Brunswick operated by its subsidiary the Canadian Atlantic Railway. Authority was given to abandon the 18.1 mile St Andrews Spur between Watt and Bartlett and the 3.7 mile Champlain Spur near Bartlett. This trackage comprises part of the second railway line to be opened in the province.

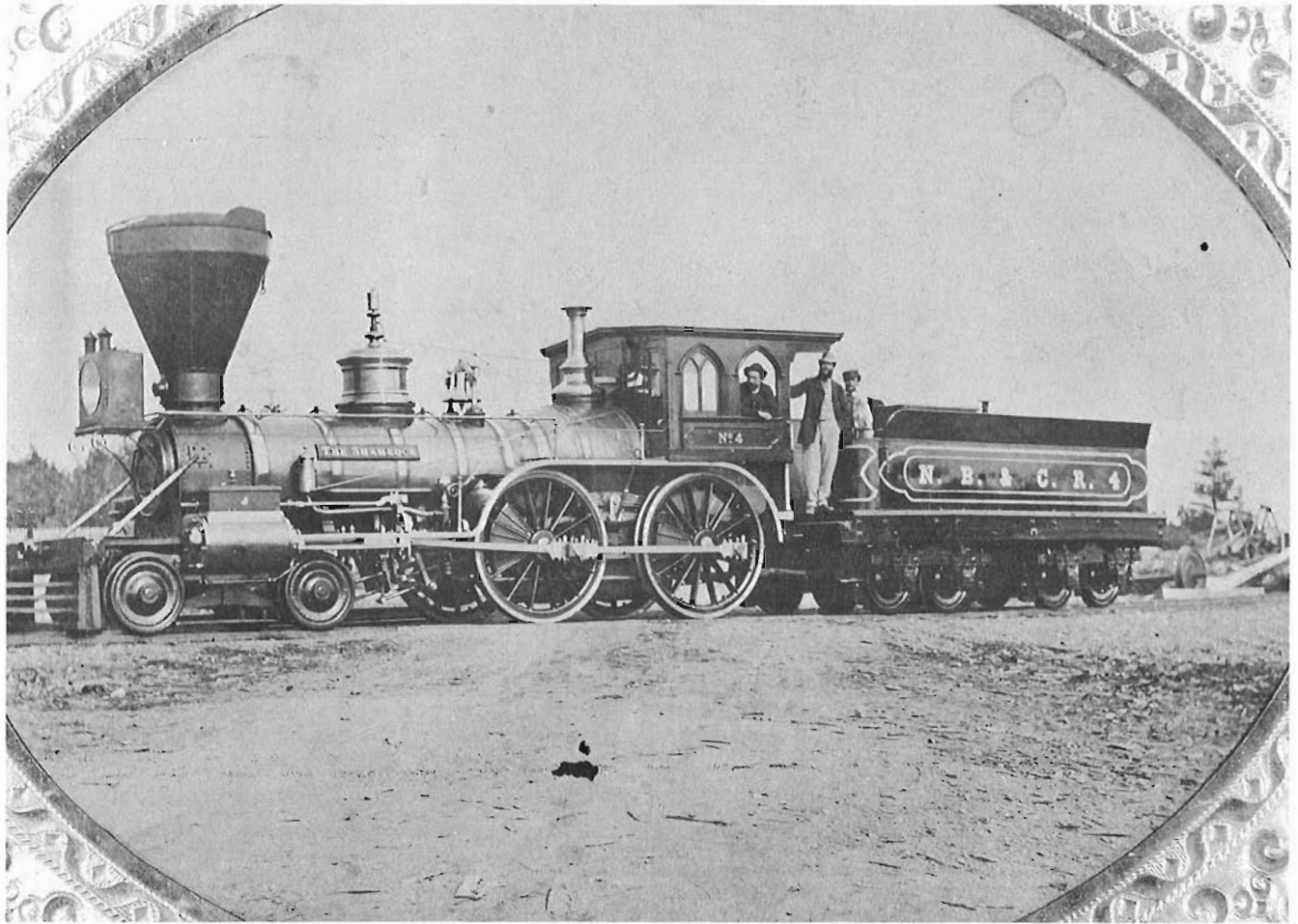
The St Andrews and Quebec Railway (StA&Q) was chartered by the Colony of New Brunswick in 1836 to build a line from St Andrews to Levis, Quebec. Surveyed to run in the most direct path between the two communities, the line would have run through territory claimed by the United States. Due to this dispute, the project languished. When the Ashburton Treaty of 1842 awarded most of the land to the United States, the project was abandoned as routing the line through British territory would have lengthened it by 300 miles.

In 1845 the project was revived. To minimize costs, it was planned to use wooden rails. When ten miles of grading was completed from St Andrews to Bartlett's Mills [since shortened to Bartlett for railway purposes], the work was abandoned in 1848. British funding for the company had dried up in the wake of the revolutions which swept continental Europe. Coupled with several major American railways' repudiation of their debts, the jittery

financial markets were closed to speculative North American ventures.

In 1850, attempts were made to revive the project. The new destination of the line was to be Woodstock, a thriving town on the banks of the St John River where the railway hoped to capture the trade of the settlements along the river valley. A contract was signed to rehabilitate the deteriorated road bed. As part of the agreement the company undertook to import rails and a locomotive for use by the contractor. Thus in March 1851 the barque "Avon" arrived from Great Britain bringing the first steam locomotive to the colony. Fittingly named the "Pioneer", the 0-4-0, which most likely was purchased second hand, had been built by the noted Stephenson firm. New Brunswick's first steam locomotive, however, was destined to languish in storage as the contractors failed to undertake their work.

After years of false starts, the fortunes of StA&Q improved in 1852. On June 4th, the wife of the Colonel Murray, the Administrator of the colony, turned the "first" sod at a colourful ceremony at Bartlett's Mills. With the official ceremony completed, the work was vigorously taken up by the British firm of James Sykes & Company. The progress on this pioneer N.B. railway was closely followed by the Canadian press. The following article is typical of the great degree of interest in the railway's progress, local "boosterism", and expectation that the railway would spur development:

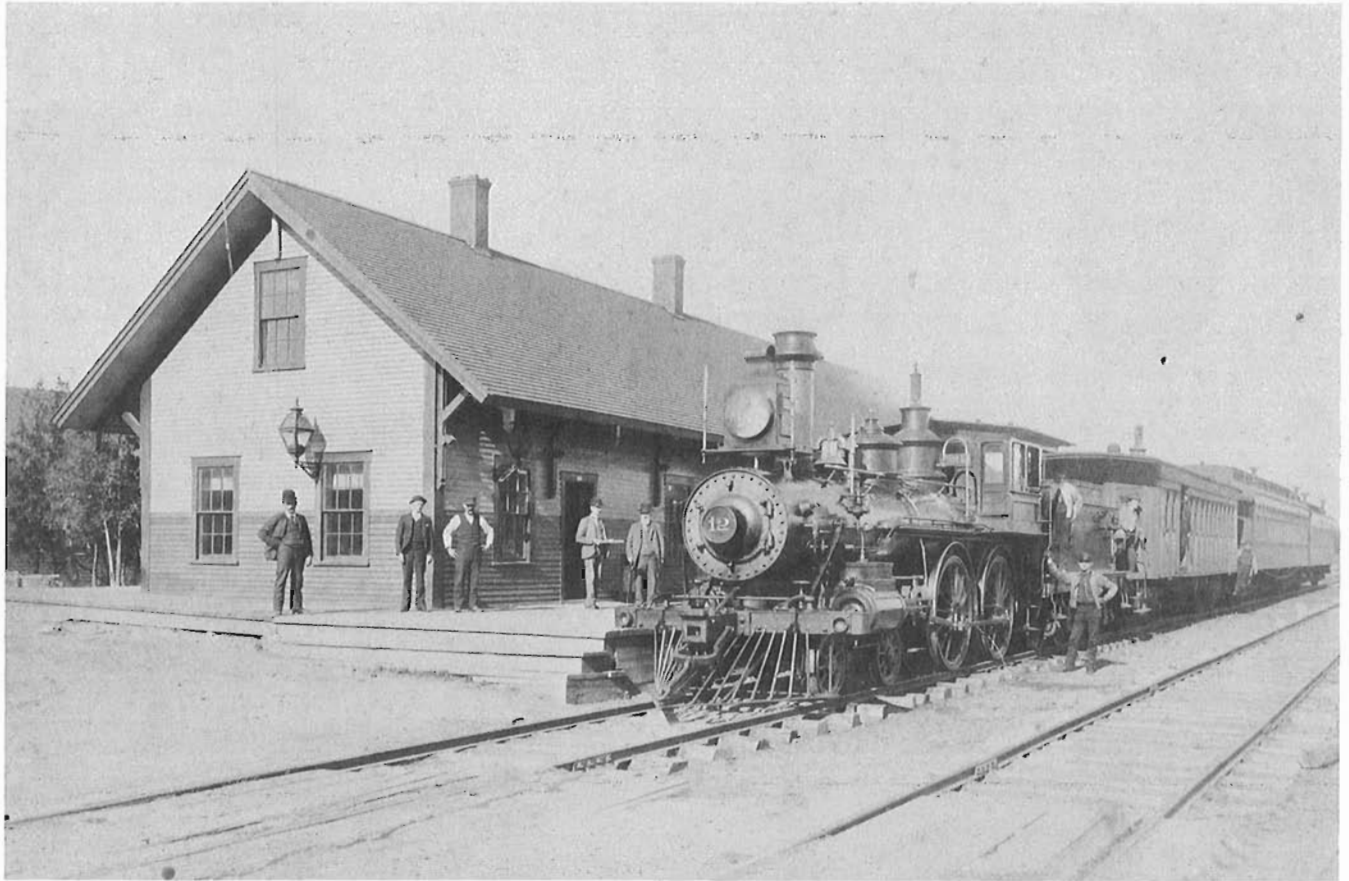


New Brunswick and Canada Railroad No. 4 "The Shamrock" was built by the Portland Company in September 1858. About 1880 it became New Brunswick Railway No. 16 and was converted to standard gauge. In 1890 it became CPR 493, and was scrapped in 1895. The original photo is a Daguerreotype taken about 1859, and, as all such photos, shows the locomotive in mirror reverse. It has been switched around for publication so as to appear properly.

Photo courtesy of the New Brunswick Museum.

"The St Andrews and Quebec Railway - We observe that the works along the line are being completed in a substantial manner; the abutment or sea-wall from Katie's Cove towards Minister's Bar, are thoroughly fastened, and the work well executed, reflecting much credit upon our townsman Mr John Treadwell, the workman, who also built the Bridge at the Cove, which has been pronounced by Engineers, English and American, to be finished in a thorough and workmanlike manner. The rails have been laid beyond Chamcook, and the Contractors are carrying on the work with as much despatch as circumstances will permit. The terminus at Indian Point is fast assuming businesslike appearance work for shops, houses and stores are springing up as if magic. It is refreshing to hear the clinking of hammers, the heavy roll of carts and the busy hum of merry workmen, all industriously engaged in their various occupations, denoting that life, stir and bustle, which gives character to a town, and tone to its inhabitants, and indicative in some degree of what may be expected as the work progresses towards completion. It must be admitted that few can

realize or conceive the vast benefits which will flow from the accomplishment of this magnificent undertaking. The great expenditure of money involved in carrying out the work must give impetus to trade and agriculture, which will soon be felt. It will also increase emigration; property will rise in value to an extent not yet conceived. We learn that several respectable families are preparing to leave the Mother Country with the intention of settling upon some of the fine lands in this country. We are also happy to state, upon authority, that negotiations are in progress for the building of a Screw Steamship, to be ready for sea early in March next, to ply directly between some port in Great Britain and St Andrews. The fact is, the time has arrived when Railroads have become necessary to the prosperity of every country, and it is with pleasure we notice that the people of New Brunswick are resolved to have these "iron avenues," which will open and develop the resources of the Province, travelling as they will through vast tracts of country." - St Andrews Standard as reprinted in Montreal Gazette October 22, 1852.



A train of the New Brunswick Railway at the station at St. Andrews N.B. in 1889, the year before the railway was leased to the CPR. Note the ancient combine car which looks as if it may date from the earliest days of the line. Locomotive No. 12 had been built by the Portland Company, for the NB & C, in 1857, a year before the "Shamrock". Under CPR operation it became No. 489 and was scrapped in October 1895. New Brunswick Museum.

Early in 1855, James Sykes perished in a shipwreck off Portland, Maine. This unfortunate event had major repercussions in the British North American colonies as he was bringing a sum estimated at 50,000 pounds to pay for the construction work on the StA&Q, Montreal and Bytown and the Brockville and Ottawa Railways. The resulting financial loss threw the contracting firms of James Sykes & Company and Sykes, de Bergue & Comapny into bankruptcy. Construction on the three railways was brought to a halt while the financial situation was reassessed. The Montreal & Bytown did not recover from the blow. More than twenty years would elapse before a direct rail line would be built between the two cities. [Bytown was the early name for Ottawa.] To pay StA&Q creditors, St Andrews' Sheriff auctioned off its construction materials, buildings and the completed grade.

The setback proved temporary. Construction on the StA&Q was resumed in 1856. On October 1, 1857, the line was completed 34 miles from St Andrews to Barber Dam, a point eight miles south of the present community of McAdam. To celebrate the event, a general holiday was declared in St Andrews. An

excursion train consisting of two engines, two brake vans, one passenger car and 22 flat cars fitted with seats carried approximately 600 passengers to the end of the line. The railway was extended another 49 miles to Richmond Corners by 1861. In 1863, the company defaulted on the payments on its bonds. The company then was placed in receivership. Plans to reach Woodstock were deferred. An eleven mile line to Woodstock was finally built from Debec Junction by the Woodstock Railway in 1868. In 1874 the New Brunswick Railway added the StA&Q to its system which blanketed the southern portion of the province. Built to the broad gauge of 5 feet 6 inches, the former StA&Q was converted to standard gauge in 1880. The trackage passed under CP control when it leased the New Brunswick Railway in 1890.

The community of St Andrews developed into a popular summer resort under the patronage of CP Presidents Sir William Van Horne and Sir Thomas Shaughnessy. Beginning in 1896, CP began to operate a through sleeper between Montreal and St Andrews once each week during the summer months to cater to Montreal families holidaying in the seaside community. The



*A view of Debec Junction taken in September 1909. Note the poster on the station which dates the photo.
CP Rail Corporate Archives.*

popularity of the resort grew to such an extent that CP increased the frequency of the through sleeper to daily starting in 1910. This sleeper service lasted until September 1958. The following month the passenger service between McAdam and St Andrews was replaced by a bus.

The 10 mile section of line between St Andrews and Bartlett was abandoned following authorization by the National Transportation Agency on December 1, 1989.

REGIONAL MUNICIPALITY PURCHASES RAIL LINE

The Regional Municipality of Ottawa-Carleton purchased the CN line between Bell's Junction and Arnprior during the summer of 1992 for \$550,000. Legal title is vested in the Arnprior-Nepean Railway.

The purchase was deemed necessary to maintain needed rail access to the BASF nylon fibres plant at Arnprior. As well, the right of way may find additional use as a transit corridor in the future. The line has been leased to BASF for twenty years. BASF, in turn, has contracted with CN to operate the line. A complete history of this line may be found in the March-April 1989 issue of "Canadian Rail".

SHORT TURNS

On October 10, 1992, the National Transport Agency authorized CN to abandon its 11.7 mile Ste Rose Subdivision between Ochre River and Ste Rose du Lac. The trackage was built by the Canadian Northern and was opened for regular service in October 1905.

Book Reviews

INDUSTRIAL LOCOMOTIVES:

A Catalogue of Industrial Locomotives and Short Lines of British Columbia and Yukon Territory

By Mervyn T. Green

Available from:

Pacific Coast Division
Canadian Railroad Historical Association
P. O. Box 1006, Station A
Vancouver, British Columbia
V6C 2P1

The Pacific Coast Division of the CRHA has undertaken to publish the latest edition of this voluminous tome. Mr Green has produced an all-time listing of the steam, diesel and electric powered vehicles which ever operated in the western most regions of the country. Running to more than 200 pages, the volume documents the locomotive rosters of the following operators:

- Brick, Chemical, Cranberry and Peat Operations
- Construction Companies and Rail Equipment Dealers
- Logging Operations and Wood Pulp or Paper Manufacturers
- Mining Operations and Metal Manufacturing Works
- Museums and Public Displays of Preserved Equipment
- Terminals, Docks and Grain Elevators
- Short Line Operations and Miscellaneous Sites

This work is truly an impressive accomplishment. Not only is the standard roster information concerning the builder, wheel arrangement, serial number and builder of each vehicle listed, Mr Green also includes the dates each of the operations was in business and its geographic location. The short line section includes every railway which operated in British Columbia except Canadian National, Canadian Pacific, Great Northern and the Pacific Great Eastern / British Columbia Railway. Rosters in the book include such major concerns as the BC Electric, Esquimalt & Nanaimo, Kettle Valley, Southern Railway of British Columbia, and Vancouver's Skytrain to small operations as the Yukon's Atlin Southern and the Victoria Terminal Railway and Ferry Company. This 1992 edition contains 1100 names of rail vehicle operators spanning the period from 1863 to 1992.

The rosters are supplemented by well-chosen photographs. Readers not familiar with British Columbia and the Yukon will find the two maps included in the book to be lacking sufficient detail.

To keep the purchase price within reasonable limits, the book has been produced on a photocopier and spiral bound. Anyone with an interest in British Columbia and Yukon railways would be well-advised to order a copy.

Reviewed by Douglas N.W. Smith.

SILK TRAINS

by Bernard Webber

Available from the author:

Mr Bernard Webber
6205 - 91 st Street, R.R. 1
Osoyoos, British Columbia
VOH 1V0

Price \$21.90, including postage and all taxes.

For more than forty years, the fastest trains to span the North American continent were special silk trains. Their purpose was to move this perishable cargo from western ports to manufacturers located in the Northeastern United States in the shortest time possible. Up until the late 1930's, Canadian National and Canadian Pacific competed not only with each other, but against the major United States railroads to secure this traffic. Silk shipments were charged nine dollars per hundred pounds making them a very lucrative business. In the latter part of the 1920's, the two Canadian lines carried over a quarter of transcontinental rail shipments and received almost \$1.3 million dollars in compensation.

In this 125 page soft cover book, Mr Webber investigates the history of the silk trade, the operation of the trains, and the factors leading to their eventual demise. In the course of his text, the author puts to rest the generally accepted notion that the need for silk trains ended with the creation of new synthetic material such as nylon. Curious readers will have to purchase the book to learn of the situation which led to the demise of these trains.

The text, which is somewhat repetitive, is supplemented by a number of photographs of the silk trains and the trans-Pacific ships which carried silk shipments. Effective use is made of tables, and graphs are used to discuss the changes which occurred in the silk business during the 1920's and 1930's.

Reviewed by Douglas N.W. Smith.

RAILROADING IN BRITISH COLUMBIA - A BIBLIOGRAPHY

By Ron Meyer

Available from:

Pacific Coast Division, C.R.H.A.
P.O. Box 1006, Station "A"
Vancouver, B.C.
V6C 2P1

This extremely valuable reference work is a greatly expanded and updated edition of the original compilation published under the same name in 1973. The first edition provided the British Columbia rail enthusiast and historian with an introductory idea of the published sources of information, available at that time, on the railways of British Columbia.

Railroading in British Columbia: A BIBLIOGRAPHY



Ron H. Meyer

The new edition follows the same over all organization as before; from the general to the specific. There are now, however, new features which make the listings more "user friendly". For instance, there are now many additional divisions and sub-headings which make it easier to find specific types of information. Also, some items are listed in more than one section of the Bibliography; this was rightly felt to be necessary in cases where the variety of detailed information contained in the item clearly related to more than one regional category, yet did not merit listing in the province-wide category. There are also short explanatory notes to describe the general contents of articles whose titles are vague or cryptic.

The author wishes, in the introduction of the book, to acknowledge the particular assistance of Mervyn T. Green (President of the Pacific Coast Division of the C.R.H.A.), and Dr. Leonard Frank, instructor at Douglas College.

The bibliography is divided into twenty-one major sections, many of which are divided into sub-sections. Some of the sections are: "Canadian Railways - General", "Canadian Pacific Railway - General", "Canadian National Railways - General", "VIA Rail Canada and Other Passenger Operations", "Railways in British Columbia - General", "British Columbia Railway (formerly PGE)", "British Columbia Electric Railway", "White Pass & Yukon Railway", "Northern Alberta Railways", "Railways of the Okanagan", "Railways of the Peace River District", etc., etc.

The entire work consists of 114 pages (plus a page of addendum) and contains many hundreds of entries. For anyone

looking for data on the railways of British Columbia, or even on Canadian Railways in general, this work is a real goldmine of information on where source articles can be found.

Reviewed by Fred F. Angus.

THE GUIDE TO CANADA'S RAILWAY HERITAGE

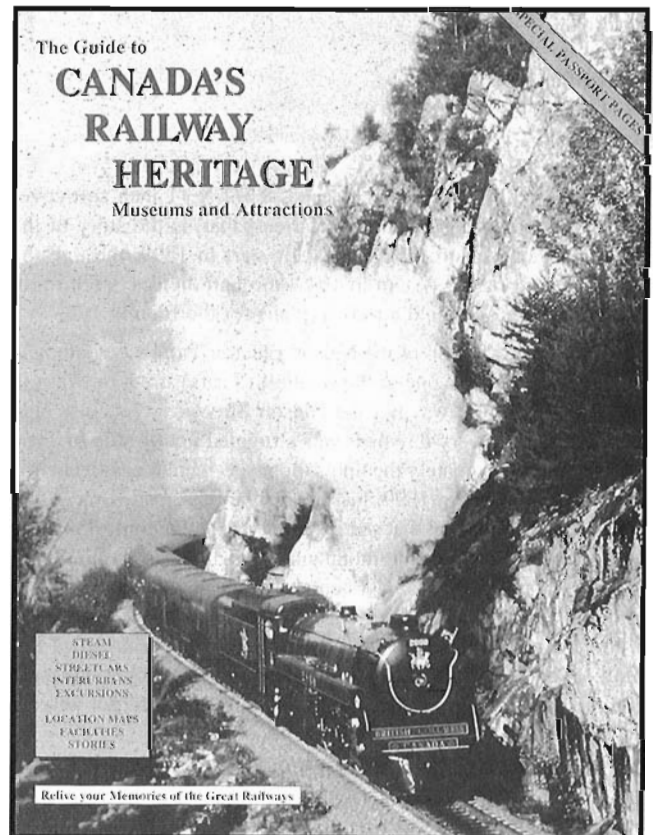
By Lawrence Adams

Published by:

North Kildonan Publications
28006 - 1453 Henderson Highway
Winnipeg, Man.
R2G 4E9

Price: \$18.95 including all postage and taxes.

This newly-published work is basically an illustrated guide to sites, especially museums, where items of railway heritage interest are preserved and, usually, on display. In all, 49 sites are described in 84 pages and there is also a map of all of Canada, showing each location by number and, in addition, each listing is accompanied by a detailed map showing how to reach each location. As a matter of interest, the geographical breakdown is: Yukon 3, British Columbia 11, Alberta 7, Saskatchewan 7, Manitoba 3, Ontario 12, Quebec 1, New Brunswick 2, Nova Scotia 1, Prince Edward Island 1, Newfoundland 1.



Merely compiling all this data, with the photos of the sites, would be a monumental job, and make the book well worth the price. However this book contains much, much more. There are also several stories such as "Gold Fever and Extraordinary Cures", "Feeding the Railway and the Family", A contemporary (1877) newspaper account to the arrival of the locomotive "Countess of Dufferin" in Winnipeg, "Aw, It Was Rough Work", "A Good Time Was Had by All". There is also a complete list of all 91 Canadian railway stations which have, as of June 1992, been designated as historic under the Heritage Railway Stations Protection Act. There is also a list of addresses of organizations where one can obtain more information on historic sites. There is a page for railway notes and, finally, there are "passport pages" where one can enter particulars of each site visited.

Anyone planning a vacation, or even a short trip, which might include an historical railway site, should take this book along. However, it is also a useful reference for those who are not travelling but are just interested in railway preservation and history.

Reviewed by Fred F. Angus.

STREETCARS IN THE KOOTENAYS

By Douglas V. Parker

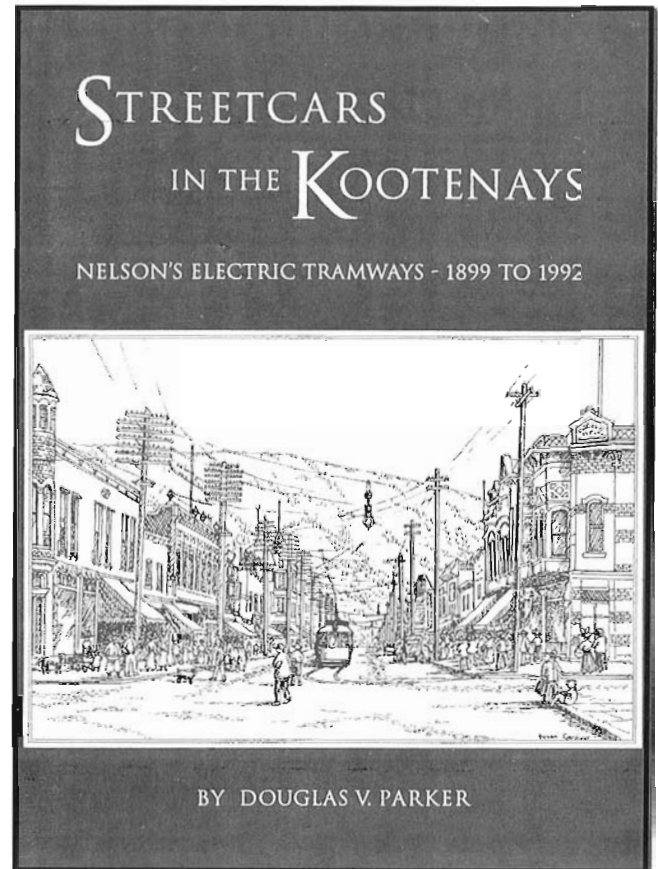
Available from:
Havelock House
5211 Lansdowne Drive.
Edmonton, Alberta
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Price \$22.95

This 196 page, fully indexed, 8 1/2 X 11 inch soft cover book, printed on high quality acid-free paper, is the story of the street cars of Nelson B.C. from their start in 1899, through the abandonment of the system in 1949, through the line's rebirth in 1992, to the present and a look at plans for the future.

The reputation of the Nelson Electric Tramway Company and its successors as one of the smallest (3 cars) street railways in the British Empire was not the Nelson Street car system's only claim to fame. Every day their cars struggled up the side of Toad Mountain; unfortunately the line's more spectacular accidents (the first of which was in 1899, just before the line opened) occurred when they came down that same mountain - out of control! Owing to its location deep in the mountains of British Columbia, those who operated the Nelson system had to contend with massive snowfalls which closed down far larger street railways. In Nelson, a small group of dedicated employees, led by superintendent Les Hall, drove the street cars, and the line's only sweeper, all night long to ensure that the first shift at Nelson's shipyard got to work on time.

For its size, the Nelson system had more than its share of problems. Besides the accidents mentioned above, there was the time in 1908 when the car barn burned down, destroying all the

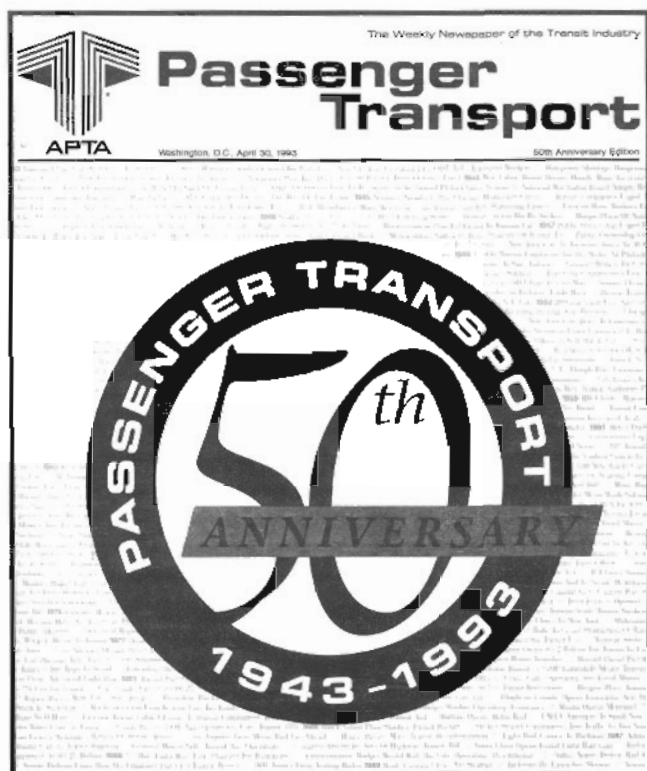


rolling stock and leading to a shutdown of more than two years. Another time, in 1921, car 2 moved backwards, pushing the line's only sweeper through the back wall of the car barn from whence it fell 35 feet to land upside-down in a ravine, badly damaged. There was also the usual shortage of money which resulted in a takeover by the city in 1914. Despite all these vicissitudes, the Nelson street car system carried on, year after year, until 1949 when, to the sorrow of trolley enthusiasts everywhere, it was abandoned and replaced by busses. No one in their wildest dreams would have ever imagined that street cars would ever again run in Nelson.

However, one car (no. 23, formerly No. 3) still survived, although deteriorating badly over the years. In 1983 a few dedicated volunteers began restoring this car and, gradually, the idea of rebuilding a track and resuming street car operations began to take shape. In 1989 work began in earnest, and on July 1 1992, the revived line opened. All this is covered in the book, together with plans for extensions in the future.

The rebirth of street car service in Nelson is one of the most interesting efforts at railway preservation in Canada, and "Streetcars in the Kootenays", with the help of 117 rare photos and maps, tells the story, past present and future, in a most instructive and enjoyable way.

Reviewed by Fred F. Angus.



THE 50TH ANNIVERSARY ISSUE OF "PASSENGER TRANSPORT"

Published by:

American Public Transit Association
1201 New York Ave. N.W.
Washington, D.C. 20005
U.S.A.

Fifty years ago, April 30 1943, the first issue of "Passenger Transport" was published in New York City. To commemorate this anniversary, the American Public Transit Association has produced a beautiful special issue describing, not only the history of the Association, but also of many public transit operations in North America. One does not have to look far for "Canadian content"; a major article on Ottawa covers the period from Ahearn & Soper up to the present day (with some quotes from the CRHA News Report), including rare photos. Among other Canadian cities, Calgary, Montreal and Toronto receive considerable attention and there are, of course, a great many accounts of city systems in the United States, all of them different and all of them very interesting. Other developments in transit during the last fifty years are covered as well, and there is also information on the present-day status of the transit industry in general.

For anyone with an interest in public transit, this fiftieth anniversary issue will be a valued reference.

Reviewed by Fred Angus.

Association and Museum History

At a recent meeting, the Board of Directors approved the establishment of a section in the CRHA Archives in which to assemble documents etc. to record the history of the Canadian Railroad Historical Association and the Canadian Railway Museum.

The Association was established in 1932 and incorporated in 1941. We have not found the minutes that we believe must have been written starting in 1932. We have complete minutes from 1950 to 1966 and from 1981 to date. We appeal to all longer-term members to search for all minutes that they might have saved from periods that they may have served on the Board, and donate them for preservation. We also wish to assemble flyers etc. about trips that the Association sponsored for many years. We have been assembling many back issues of the CRHA News Report and Canadian Rail, but are missing the following: Nos. 31 through 95,

116, 117, 296, 298, 299, 300, 312, 314, 319, 321, 377, 413. In earlier years the Association issued "Bulletins". We have Nos. 1 through 15, but are missing Nos. 16, 17, 18. Missing ones would be much appreciated. Photographs from trips and other activities will also be welcome.

The history of the Canadian Railway Museum needs donations of minutes from 1965 until recent years. Slides and pictures from 1961 to date will be greatly appreciated. We have a complete set of the Museum guide books, and reports on planned Museum expansion compiled over the years are on hand.

Please communicate with Stephen Walbridge who is coordinating this activity. The address is: 196 Lakeview Ave., Pointe Claire, Que. H9S 4C5. Phone: (514)-695-4012. Thanks for your cooperation.

BACK COVER: The date is Friday, August 10 1990, and the location is the CN waterfront yard in Windsor, Ontario as we see VIA Rail F40Ph-2 No. 6426 go for a spin on the turntable. The skyline of Detroit is clearly visible in the background. Only a few weeks after this photo was taken, VIA ceased operation of the turntable facility.

Photo by Pierre Ozorak.

Canadian Rail

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