

# Canadian Rail



No.343  
AUGUST 1980







# CANADIAN RAIL

Published monthly by The Canadian  
Railroad Historical Association  
P.O. Box 22, Station B  
Montreal, Quebec, Canada H3B 3J5

ISSN 0008-4875

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## FRONT COVER

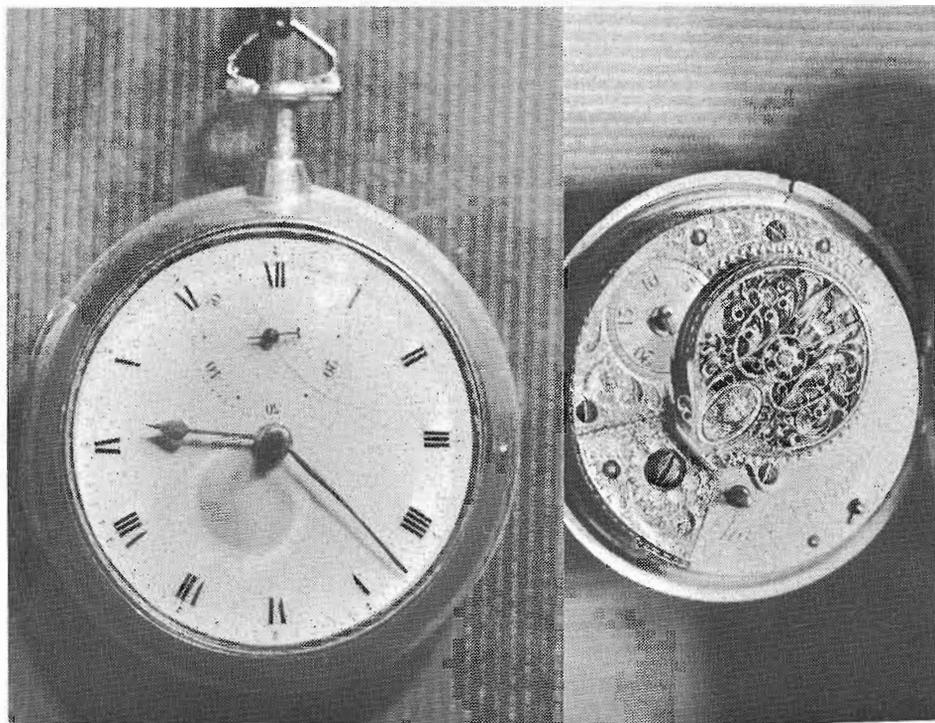
A Canadian Pacific Railway watch made by the American Waltham Watch Co., serial number 8,858,139. This watch was purchased new in 1898 by Ewan Kenneth Nicholson, section foreman at Milan, Que. Mr. Nicholson paid the C.P.R. \$1.00 per month until the price of \$23.00 was met. (Photo: Canadian Pacific Ltd.).

## OPPOSITE

A view of the movement of No. 8,858,139 clearly showing the Canadian Pacific beaver and shield. This watch is a Waltham model 1883 made in 1898 or 1899. (Photo: Canadian Pacific Ltd.).

# RAILROAD POCKET WATCHES IN CANADA

by Fred Angus



A verge watch of the type still in use in the early days of railways. This particular one was made by Charles Norman in London England in 1797, and, according to papers found inside the case, was in service at least as late as the 1870's. While such watches were never noted for accuracy, they were rugged and long-lasting, and, in the days before rigid watch inspection, were no doubt often employed in early railroad service. (Collection of the author).

For a century and a half the pocket watch has been almost indispensable in the performance of duty of railroad employees concerned with operating trains. Many illustrations show railroaders with their trusty timepiece, so much in fact that the pocket watch has become almost as much of a railroad symbol as the conductor's punch, the engineer's hat, or the brakeman's lantern. How many of us, however, have looked inside the case of the familiar watch to see "what makes it tick", or to consider how such a small but complicated mechanism came to be developed? The story of the evolution of the precision timepiece that is the railroad watch is a long and fascinating one, a definite part of the much larger story of Canadian railways.

The start of railway development in the first half of the nineteenth century was undoubtedly the greatest single advance in transportation technology ever seen in history. Where railways were built, average speeds suddenly increased by more than tenfold over previous methods of travel such as by road and water. It soon became very apparent that efficient use of this new means of transportation required timekeeping of a much greater accuracy than had been commonly in use before. An error of five minutes would have had little significance in the more leisurely days of stage coach or canal travel, but on the railway, particularly where trains on single-track lines had to meet, such an error could be disastrous. Fortunately, the period of initial railway development coincided with the coming into use of watches of much greater accuracy than had been available, and the improvement in watch design kept pace with the increasing speeds of railway trains. It is the intention here to give only an outline sketch of the development of railroad watches with special reference to Canada. The subject of time service and inspection of timepieces is so involved that it would take a book to cover it, but it is a vital part of the safe operation of railways.

In the year 1800, a person who could afford to buy a watch would probably have one with what is known as a "verge" escapement. The design of this mechanism had changed little since about 1670 and was quite complicated utilizing a crown wheel and a right-angle drive consisting of a contrate gear meshing with a pinion on the same axle as the crown wheel. Power was supplied from the mainspring through a "fusee", an ingenious device which employed a chain winding around a spiral pulley to equalize torque as the spring ran down. A verge watch would run for about 30 hours on one winding, and if properly adjusted could be relied on for an accuracy of five or ten minutes a day, perfectly adequate for the less demanding schedules of that era. This is not to say that more accurate watches were not available. The eighteenth century had seen much development in the design of timepieces, most notably the marine chronometer which kept time to accuracy measured in seconds per month. Also, new watch escapements such as the cylinder, the duplex, and the lever had been invented and gave promise of much better accuracy. The trouble was that all these watches of improved design were very expensive compared to the verge and difficult to produce in quantity, furthermore the extra accuracy was not then justified economically. Hence the ancient verge design accounted for more than 90% of all watches made. Between 1800 and 1825 the increasing tempo of life, influenced by the Industrial Revolution as well as the Napoleonic

Wars, required greater accuracy in timekeeping. Watchmakers, especially in England, tried to develop better watches or to facilitate manufacture of previously-invented designs. After much experimenting, it appeared that the "lever" escapement, first invented as far back as 1760, was the best for the watch of the future. By 1820 the lever watch could be made in quantity at a price which, considering its superiority, was competitive, and by 1850 the lever design accounted for the majority of all watches in use. The name "lever watch" refers to the escapement which permits free oscillation of the balance wheel and should not be confused with the "lever set" watch (which does, however, usually have a lever escapement) of which we will hear more later. The conclusion that the lever was best was based on accuracy, economics of manufacture, ease of maintenance, and resistance to damage under rough use. That this conclusion was valid is shown by the fact that almost all mechanical watches made today are of lever design, and its supremacy is threatened only by the electronic watches now being produced. All the railroad watches considered in this article have the lever escapement. Thus, when the railway revolution occurred in the 1830's and 1840's, watches were readily available with the accuracy required for train operation.

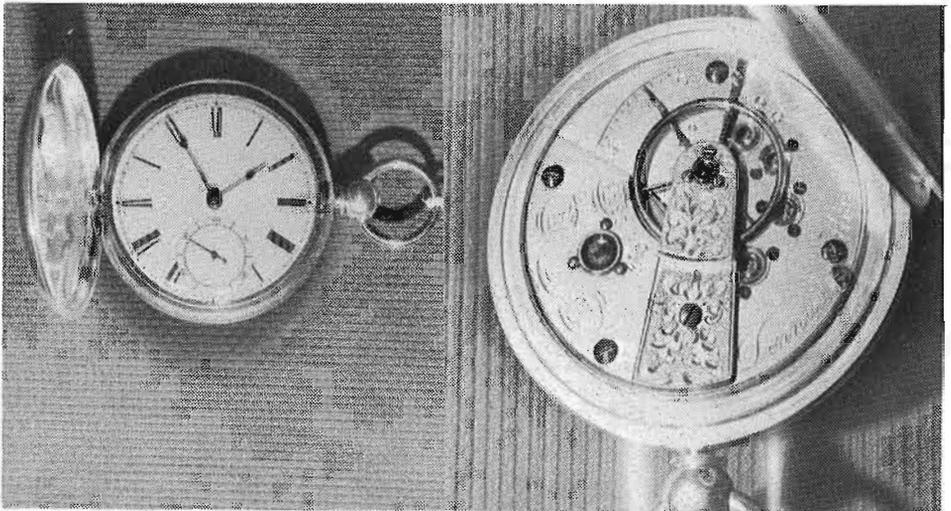
At the time Canada's first railway opened in 1836 there were no standards for railroad watches and in fact more than half a century would pass before strict standards and specifications would be required for all watches in railroad service. In the early days it was only required that a watch used by operating personnel



Manufactured by E.C. Mitchell of Liverpool England in 1825, this watch, with lever escapement, was the most modern and up-to-date type of watch in the early days of railroading. No. 669 would have passed any inspection (such as may have existed) before about 1860, and even today is a better time-keeper than some cheap watches presently used (but not in railroad service of course). Note the words "Patent Lever" on the balance cock to draw attention to the new feature. The heavy case and dust cap has protected the works for more than 150 years. (Collection of the author).

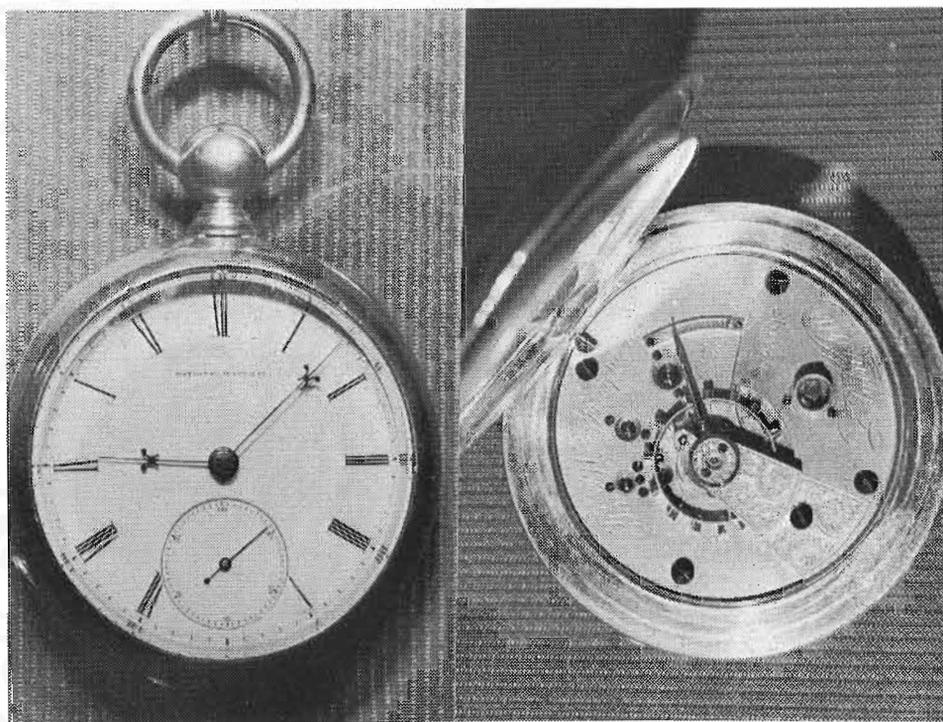
keep accurate time and be checked periodically with clocks located at major stations. There is no record as to what watches were used in the pioneer era, but a typical good watch in use in 1836 would be about  $2\frac{1}{4}$  inches in diameter,  $3/4$ " thick, and weigh more than a quarter of a pound. It would be in a silver case, wind and set with a key, and have a lever escapement as well as the "fusee" chain-drive device. Timekeeping to within one minute per day could be relied upon if the watch was properly adjusted, and it was rugged enough for railroad service. However watches were still basically hand-made with non-interchangeable parts, and so repairs were expensive and time consuming if a part was broken.

After 1850, the development of railways in North America increased at a very great rate. Coincidentally with this, a great advance occurred in watchmaking. Starting in the 1850's, machine-made watches with interchangeable parts made their appearance and were soon found to be as good or better than the hand-made ones. Not only could watches be produced much more cheaply but, equally important, could be repaired cheaply using standard replacement parts. The pioneer of this system was the American Watch Company at Waltham Massachusetts, and during the next hundred years millions of railroad-grade Waltham watches were made for use on the railways of the world. Many of the later "Walthams" are still in use, and are likely to remain so for years to come. The new mass produced watches incorporated much greater use of jewelled bearings and in addition the improved mainsprings meant that the watches no longer required the delicate and complicated chain drive. The early Wal-



One of the first machine-made watches ever produced, No. 2386 was made at Waltham Mass. about 1856. The forerunner of many millions of quality watches produced by Waltham over the next hundred years, this design was the pioneer attempt to make a quality watch in America at a competitive price. During the 1850's, 1860's, and probably considerably later, watches of this basic design were in use on railways on both sides of the U.S. - Canada border. (Collection of the author).

thams cost \$40.00 each in 1857, but this price was greatly reduced for the more common grades as production increased. About this time the United States became the major producer of good watches at reasonable prices, and continued so until the twentieth century when Switzerland gained this distinction. Soon other companies such as Elgin (1864), Illinois (1869), and Hamilton (1892) were formed to produce quality watches and it is during the latter part of the nineteenth century that the true railroad watch made its appearance. Canada did not produce railroad watches, but some U.S.-made watches were produced to Canadian specifications, and many other U.S. railroad watches were used on Canadian railways, so the development of railroad watch standards in Canada after 1880 closely followed that of the United States.



The first watch specifically designed with the railroad man in mind was the "B.W. Raymond" grade produced by Elgin starting in 1867; in fact Elgin's first watch was one of this type. The one shown here, serial number 2042, was made in 1867, and has fifteen jewels, compensating balance, and is adjusted for temperature and position. The gold-filled case, also introduced at this time, meant that a strong, non-tarnishing case could be had for a small fraction of the cost of solid gold, and such cases became the most popular type for railroaders in later years. This watch is representative of the final development of the key-wound watch. Already stem winding was beginning to appear, and by the 1880's all high grade watches were stem-winders. Although manufactured in the year of Canada's confederation, No. 2042 will still keep time to within a few seconds a day. (Collection of the author).

Following the introduction of mass production, other problems of watch design were solved step by step. Although a watch may keep excellent time in a fixed environment, the result may be quite different when it is subject to changes in temperature and position in actual use. The temperature variation was reduced by means of a compensated bi-metallic balance wheel, but the position errors required the careful adjusting of each watch as it was made. For some applications, adjustment was not necessary, but railroad use required adjustment to various positions, originally three, but later higher grade timepieces were adjusted to as many as six positions. Although there was still no official railroad standard in the 1870's, many railroads ordered good watches directly from the manufacturer for the use of their employees, and in some cases the railroad name would appear on the dial, or even on the movement itself. A railroad-quality watch of the 1870 period such as the Waltham "Crescent Street" or the Elgin "B.W. Raymond" would have about 15 jewels, compensated balance, and be adjusted to at least three positions. It would still be key-wound and key-set, but could keep time to within a minute a week and would be a good watch even today although not, of course, able to pass the modern railroad inspection.

**ELGIN WATCHES,**



MANUFACTURED BY THE  
**NATIONAL WATCH COMPANY,**  
ELGIN, ILLINOIS.

OFFICE GEN'L. SUPT. U. P. R. E. OMAHA, NEB., Dec. 10th, 1870.  
HON. T. M. AVERY, Pres't National Watch Co., Chicago, Ills.

DEAR SIR:—During the months that I have carried one of your B. W. Raymond Watches, it has not failed to keep the time with so much accuracy as to leave nothing to desire in this regard.

For accuracy in time-keeping, beauty of movement and finish, your watches challenge my admiration, and arouse my pride as an American, and I am confident that in all respects they will compare successfully in the markets of the world with similar manufactures of older nations. They need only to be known to be appreciated.

Yours, most respectfully,  
G. G. HAMMOND, Gen'l. Supt.

PRINCE R. R. CO. GEN'L. SUPT.'S OFFICE, ALTONA, ILL., Jan. 10th, 1870.  
T. M. AVERY, Esq., Pres't National Watch Co., Chicago.

DEAR SIR:—This Company has purchased and put in the hands of its engineers eighty "Raymond movements," which have given excellent satisfaction and proved to be very reliable time-keepers. In addition to these, quite a number of Elgin Watches have been purchased by officers and employees of this Company, all of whom have been well pleased with the efficiency and regularity of the movement manufactured by the National Watch Company.

Respectfully,  
EDWARD H. WILLIAMS,  
Gen'l. Supt.

The real Elgin Watches, elegant, accurate, durable, in many styles and at various prices, each accompanied by the special warranty certificate of this Company, and usually also guaranteed by the local dealer or watchmaker, can be had of jewelers in all towns throughout the United States. Call and ask to see them. As an additional protection, look for "National Watch Co." on the dial and one of the following TRADE-MARKS, viz. "B. W. Raymond," "H. E. Colver," "H. H. Taylor," "G. H. Wheeler," "W. J. Parry," "Matt. Lyden," "J. T. Riperson," "Lady Elgin," "Frances. Emile," together with the words "ELGIN, ILLS.," engraved upon the gilt plate inside. These are the trade-marks to denote the various grades and styles, but, as even these have been pirated, require also the special warranty certificate, only signed by T. M. Avery, the President of the Company, and numbered to correspond with the watch.

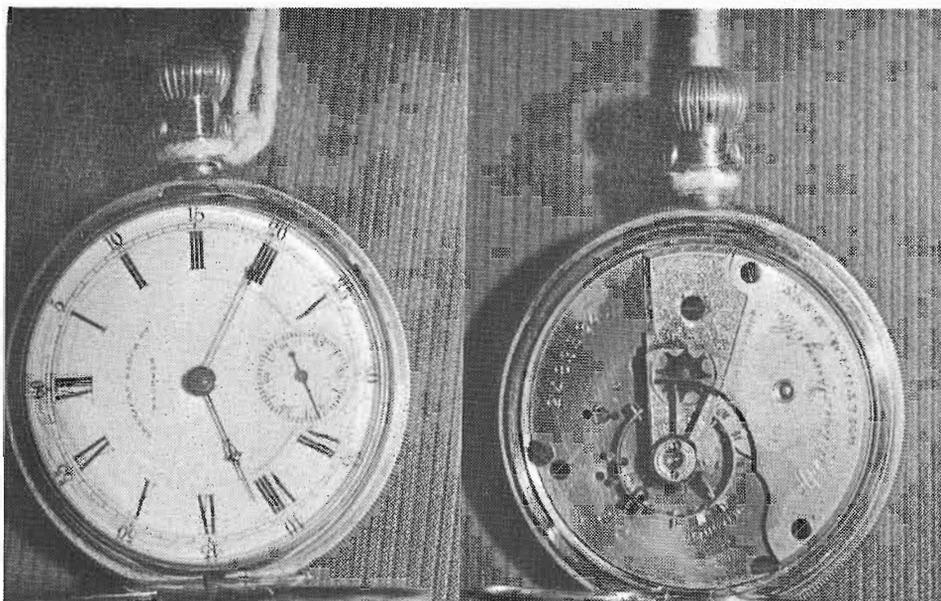
**THE NATIONAL WATCH COMPANY.**  
Factory at Elgin, Illinois. Business Office, 139 Lake Street, Chicago.

An advertisement for the National Watch Co. of Elgin Ill. in 1870. No. 19458 shown in the ad. is the same as No. 2042 depicted above. Elgin watches have been used by most railways in Canada and the U.S. from their start in 1867 until the present.

The next development was the stem-winding watch which came into general use soon after 1870. It was no longer necessary to carry a key to wind and set the watch, and the elimination of the key hole meant that the case could be sealed tighter and so made more dust-proof. However the new method of setting by pulling out the winding knob had the disadvantage that the watch might accidentally be set while winding with potentially disastrous results. Therefore the method of "lever set" (not to be confused with lever escapement) was developed for railroad watches. By this method the watch could not be set unless a lever was pulled out to engage the setting gears. This lever could only be reached by opening the bezel surrounding the watch glass, and so eliminated the possibility of accidentally changing the setting. A more dust-tight case was invented in which the front and back of the case were screwed on, thus sealing the movement into the case. Both the lever setting and screw case became required features for railroad watches in the 1890's.

The 1890's witnessed the first concerted effort on the part of the railways to adopt official standards for railroad watches. Before this time the requirements varied widely from railroad to railroad, some were excellent while others were not. It is said that crews used an alarm clock hung from an nail in the engine cab on at least one short line! The story is that a disastrous collision in Ohio in 1891 was caused by inaccurate timekeeping, and this was the event that at last forced the issue and resulted in the start of uniform standards. In the United States these standards were adopted in 1893 and required a minimum of 17 jewels, adjustment to five positions, and temperature compensation for the range from 40 to 95 degrees Fahrenheit. The watch must also be lever-set, have the winding knob at the numeral "12", and have a plain dial with arabic numerals. Since most existing watches did not meet these new standards, there was a sudden demand for new higher quality timepieces. To satisfy this demand two new companies came into existence for the production of railroad watches. The Hamilton Watch Company was formed in 1892 to manufacture high grade railroad watches, the first being completed in 1893. The Ball Watch Company did not make any watches but ordered them made to its specifications from other manufacturers. The older companies, such as Waltham and Elgin, not to be outdone, introduced new models in keeping with the new standards. Elgin developed the "Veritas" and "Father Time" designs, while Waltham produced its famous Model 1892 in many different grades, this being the first Waltham designed "from the ground up" as a railroad watch. Two watch designs of this period which were very popular in Canada were the Waltham models 1883 and 1892. Both were produced for many years, the Model 1892 continuing in production until 1918, while the Model 1883 actually outlasted the 1892, being manufactured until 1920. Although in later years the 1892 was superior to the 1883 (none of the latter, for example, being ordered by C.P.R. after 1904) the higher grades of both models were considered as railroad standard for many years, and both were ordered by the major Canadian railways over a long period of time.

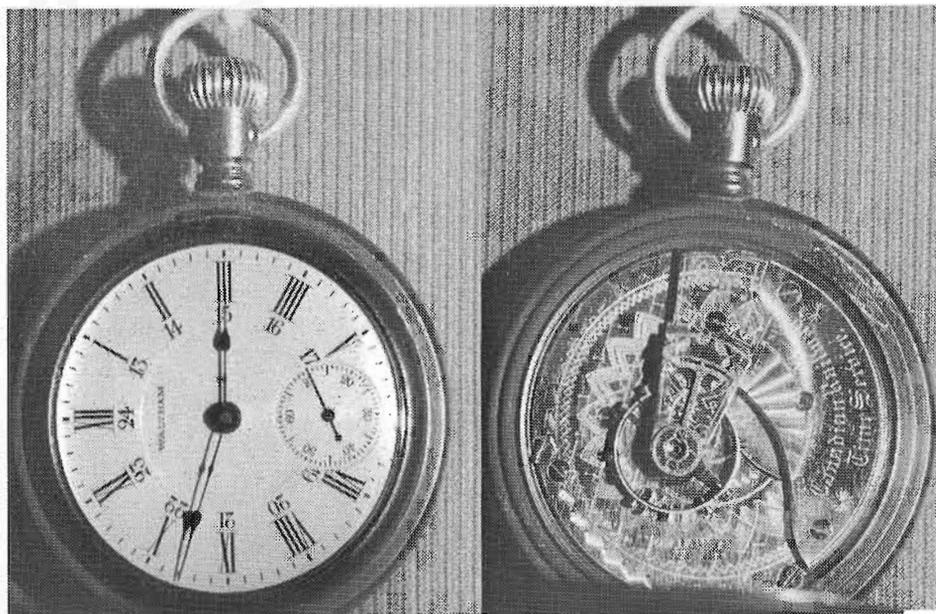
It is in this period that a distinctly Canadian variety of railroad watch made its appearance. The Canadian Pacific Railway had adopted 24-hour time on its Western lines in the construction days of the 1880's, and watches ordered for the C.P.R. and, later, other Canadian railways had the numerals "13" to "24" on the dial as well as the usual "1" to "12". Even more truly Canadian were the Waltham watches especially marked "Canadian Pacific Railway" and those marked "Canadian Railway Time Service" directly on the movement. These were produced in many different lots between the



A watch with a definite association with the history of railways in Canada, No. 2,489,534 was made by Waltham in 1884 and was presented to Richard Marpole of the C.P.R. in 1887. Mr. Marpole was superintendant of construction and operation on 500 miles of the Lake Superior Division when the first through train was run in 1885. He also was the first to prepare timetables on the 24-hour system first used by C.P. at that time. Ironically, however, this watch does not have the 24-hour dial. Quite apart from its railroad interest, No. 2,489,534 is an excellent example of a railroad watch of the '80's, being a Waltham model 1877, stem-wind, with patented fine-adjusting regulator.

1890's and about 1920, and were mostly 17-jewel (although a few were 21-jewel) watches in models 1883, 1892, and the smaller model 1908. While the Waltham serial number list indicates that 4570 "C.P.R." watches were made between 1897 and 1919, and 1451 "C.R.T.S." from 1907 to 1918, this cannot be relied upon exactly as examples are known to exist outside the given ranges. In fact one "C.R.T.S." watch observed bears a serial number indicating that it was made about 1892, fully fifteen years before the records say this type began! In other instances watches shown as being in the "C.P.R." or "C.R.T.S." series are not so marked in fact, all this indicating that the Waltham list, compiled years after the fact, is only an approximate guide and actual markings may differ from those officially recorded.

By 1900 the railroad watch had reached a high state of perfection, so much so that no really fundamental changes in design were made for more than sixty years. A new, smaller size (known as "16" size) came into use and gradually superseded the older "18" size, and improvements were made in some other features. These included improved non-magnetic balance-spring alloys, extra jewels (up to 23 or even as high as 25), double-roller locking in the escapement, and adjustments to six positions. Nevertheless, a good railroad pocket watch of the late 1890's bore a definite similarity to one of the 1960's, and while the older one would not pass the more strict



Complete with 24-hour dial, patent regulator and inscription: "Canadian Railway Time Service", this Waltham model 1883 watch No. 6,008,385 was made in 1892 and is one of the first watches specifically marked for Canadian railway use. Although Waltham records do not indicate any "C.R.T.S." watches before 1907, there must have been some orders for such watches beginning in the early 1890's and continuing until 1918. This watch is in a "hunting case" (i.e. there is a hinged cover over the dial), a style that was not much used on railroad watches after 1900, since railways preferred open-face watches.

(Collection of P. Kushner).

inspection criteria of the later days, it would still be perfectly adequate for all but the most demanding situations. As an example of railroad watch standards of the first half of the Twentieth century, the following was required of watches in the service of the Canadian Pacific Railway under regulations dated 1922: "The standards adopted by this company are for grades of movements that have been approved and listed by the Chief Inspector of Time Service. These must be equal or above 17 jewel, Breguet hair spring, patented micrometric regulator, double roller, lever set, mean time screws, and adjusted to temperature, isochronism and at least five positions. Name of maker, name or number of grade, and number of positions must be stamped on the movement. Time variation must not exceed 30 seconds per week."

After about 1950 the situation began to change again. Wrist watches had now come into fashion and eventually the railways began to approve some wrist watches for railroad use while continuing to approve pocket watches that met the standards. In more recent times, electronic watches have become a great challenge to mechanical ones. While offering more accuracy, their dependability under rough usage has been a drawback in certain cases, but now some models are being approved. Manufacture of high quality mechanical watches still continues, but has become more and more the domain of the Swiss. The Waltham and Elgin companies were sold and stopped making watches in the United States in 1957 and 1965 respectively, but these names are still used on Swiss products. Finally, in December 1969 Hamilton ceased production of its 21-jewel Railway Special Model 992B a type which had been introduced in 1941. This was the last railroad pocket watch made in America, and when the last one came off the assembly line it was truly the end of an era.

In the history of Canadian railways we have seen that no railroad watches were actually manufactured in Canada although some were marked for Canadian railways. At first English, later American, and today Swiss, watches have been used in the nearly century-and-a-half of Canadian railroading. Many of the earlier watches are still in existence being treasured keepsakes of former railroaders or their families. These survivors are true railroad artifacts and well worthy of preservation. Although records say that almost 6000 "C.P.R." and "C.R.T.S." watches were made they are seldom found today and one wonders where they are if they still exist. So before you turn in that old "turnip" be sure to give it a good examination. It may well be a genuine and important relic of the great era of railroads in Canada.



OUR 24-HOUR WATCH.

A drawing of a 24-hour watch used by the Canadian Pacific Railway in 1888. The C.P.R. was a pioneer of the 24-hour system, and used this drawing to advertise this system to passengers.

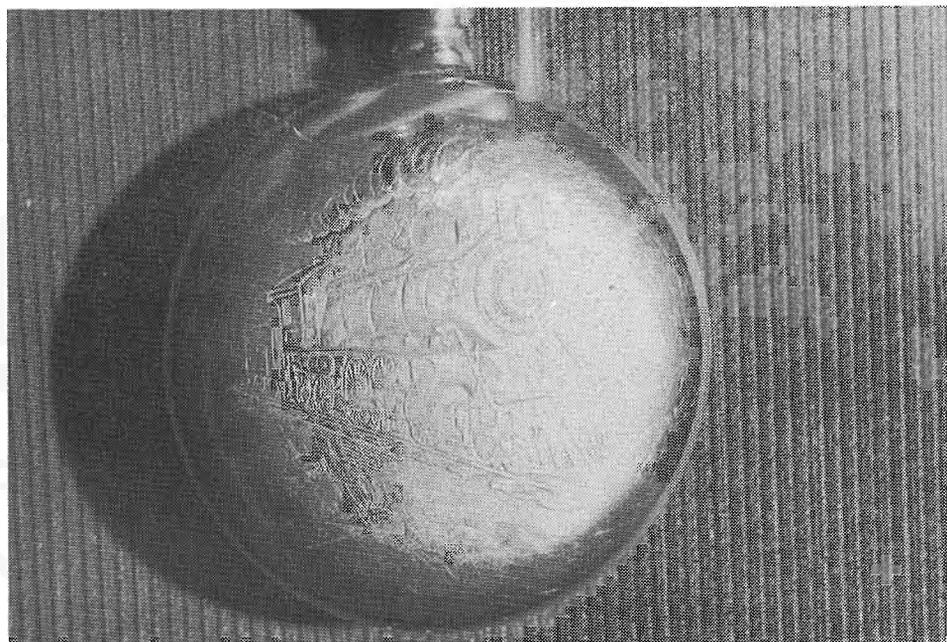
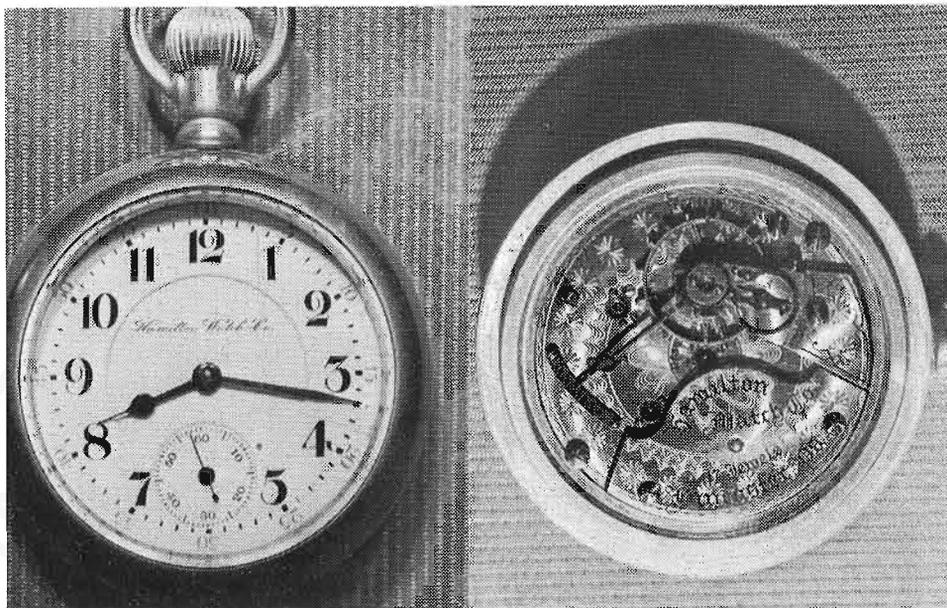


A pair of "C.P.R. Walthams" which are not recorded in the official lists and which present some puzzling features. No. 5,728,976 (top) bears the name of "S. Porte, St. Stephen N.B." on the dial instead of the usual "Waltham". No. 7,903,986 (bottom) is the same as the standard C.P.R. watch of the period except it is pendant-set instead of lever-set. Possibly at that time some railroad service did not require lever-set watches. Both are Waltham model 1883, and both have the 24-hour dial and C.P.R. beaver and shield. No. 5,728,976 was made in 1892, while No. 7,903,986 dates from 1897. (Top: Collection of L.O. Leach, bottom: Collection of the author).

T A B L E 1

## CANADIAN PACIFIC RAILWAY WATCHES REPORTED IN WALTHAM SERIAL NUMBER LIST

SERIAL NUMBER RANGE	QUANTITY	JEWELS	MODEL	APPROX YEAR MADE
7,903,201 - 7,903,220 *	20	17	1883	1897
10,042,501 - 10,042,900	400	21	1892	1901
10,082,601 - 10,082,700	100	21	1892	1901
11,072,501 - 11,073,000	500	17	1883	1902
12,674,001 - 12,674,500 **	500	17	1883	1904
14,192,001 - 14,192,200	200	17	1892	1905
15,024,701 - 15,025,000	300	17	1892	1907
18,038,201 - 18,038,400	200	17	1908	1911
18,064,001 - 18,064,300	300	17	1892	1912
19,002,201 - 19,002,400	200	17	1908	1913
19,086,101 - 19,086,300	200	17	1892	1913
20,000,101 - 20,000,300	200	17	1892	1914
20,001,901 - 20,002,100	200	17	1908	1914
22,017,601 - 22,017,700	100	17	1892	1918
22,023,101 - 22,023,200	100	17	1908	1918
22,066,501 - 22,066,650	150	17	1908	1918
22,155,801 - 22,156,000	200	17	1908	1918
22,294,001 - 22,294,200	200	17	1908	1918
23,271,001 - 23,271,500	500	17	1908	1920
TOTAL FOR 1883 MODEL:	1020.			
TOTAL FOR 1892 MODEL:	1800.			
TOTAL FOR 1908 MODEL:	1750.			
GRAND TOTAL C.P.R. :	4570.			



The Hamilton Watch Company of Lancaster Pennsylvania started making watches in 1892, their first model being the "Model 936". The one shown here, No. 6218, is a model 936 and was completed by the factory on December 12 1894, being shipped to a jeweller on February 27 1895. Hamilton watches have always been very popular with railroaders. The 4-4-0 locomotive engraved on the back of the case of No. 6218 (no relation to the C.N. locomotive of that number!) is typical of the "art" often found on watch cases of that period.  
(Collection of the author).

T A B L E 2

CANADIAN RAILWAY TIME SERVICE WATCHES REPORTED IN WALTHAM SERIAL NUMBER LIST

SERIAL NUMBER RANGE	QUANTITY	JEWELS	MODEL	APPROX YEAR MADE
15,005,501 - 15,005,700	200	17	1892	1907
15,112,501 - 15,112,700	200	17	1892	1907
18,038,101 - 18,038,200	100	17	1908	1911
18,063,801 - 18,064,000	200	17	1892	1912
19,002,401 - 19,002,500	100	17	1908	1913
19,086,001 - 19,086,100	100	17	1892	1913
20,000,000 - 20,000,100	101	17	1892	1914
20,001,801 - 20,001,900	100	17	1908	1914
22,017,501 - 22,017,600	100	17	1892	1918
22,023,001 - 22,023,100	100	17	1908	1918
22,066,651 - 22,066,700	50	17	1908	1918
22,168,501 - 22,168,600	100	17	1908	1918
TOTAL FOR 1883 MODEL:		0.		
TOTAL FOR 1892 MODEL:		901.		
TOTAL FOR 1908 MODEL:		550.		
GRAND TOTAL C.R.T.S.:		1451.		

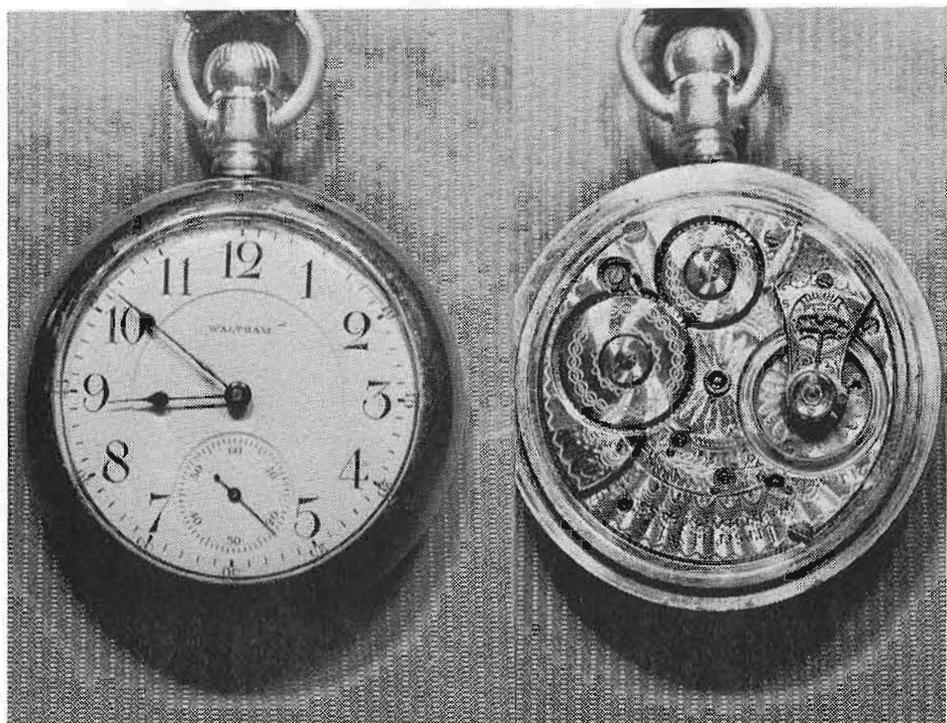
T A B L E 3

CANADIAN RAILROAD WATCHES KNOWN TO EXIST  
BUT NUMBERED IN RANGES SHOWN BY WALTHAM LIST AS BEING OF OTHER TYPES

SERIAL NUMBER	TYPE	CONTAINED IN RANGE	MODEL	APPROX YEAR
5,728,976	CPR	5,728,001 - 5,729,000	1883	1892
6,008,385	CRTS	6,007,001 - 6,009,000	1883	1892
7,903,986	CPR	7,903,221 - 7,904,000 ***	1883	1897
8,858,139	CPR	8,857,001 - 8,858,500 ****	1883	1899
9,544,796	CPR	9,544,701 - 9,544,900	1892	1900
10,058,400	CPR	10,058,001 - 10,058,500	1883	1901

N O T E S F O R A L L T A B L E S

- \* THIS LOT PROBABLY INCLUDES MORE THAN THE 20 WATCHES IN THIS RANGE.  
SEE NOTE \*\*\* BELOW.
- \*\* IN THIS RANGE, NOS. 12,674,121 12,674,126 AND PROBABLY MANY OTHERS  
ARE PENDANT-SET AND ARE NOT C.P.R.
- \*\*\* NO. 7,903,986 IS PENDANT-SET, UNLIKE MOST RAILROAD WATCHES.  
NO. 7,903,714 IS (OR WAS) PROBABLY ALSO THE SAME. EVIDENTLY THIS  
RANGE CONTAINS SOME PENDANT-SET C.P.R. WATCHES IN ADDITION TO THE  
20 LEVER-SET ONES IN THE SERIES 7,903,201 - 7,903,220.  
ALL 800 OF BOTH RANGES WERE BASICALLY THE SAME AND WERE PROBABLY  
PRODUCED ON THE SAME DAY AS PART OF THE SAME RUN.
- \*\*\*\* THIS RANGE IS OFFICIALLY SHOWN AS BEING MODEL 1892 ALTHOUGH  
NO. 8,858,139 IS DEFINITELY MODEL 1883 WHILE NO. 8,857,912  
IS MODEL 1892. HOWEVER THE NEXT RANGE (8,858,501 - 8,859,500)  
IS LISTED AS MODEL 1883 SIMILAR TO THE C.P.R. GRADE.

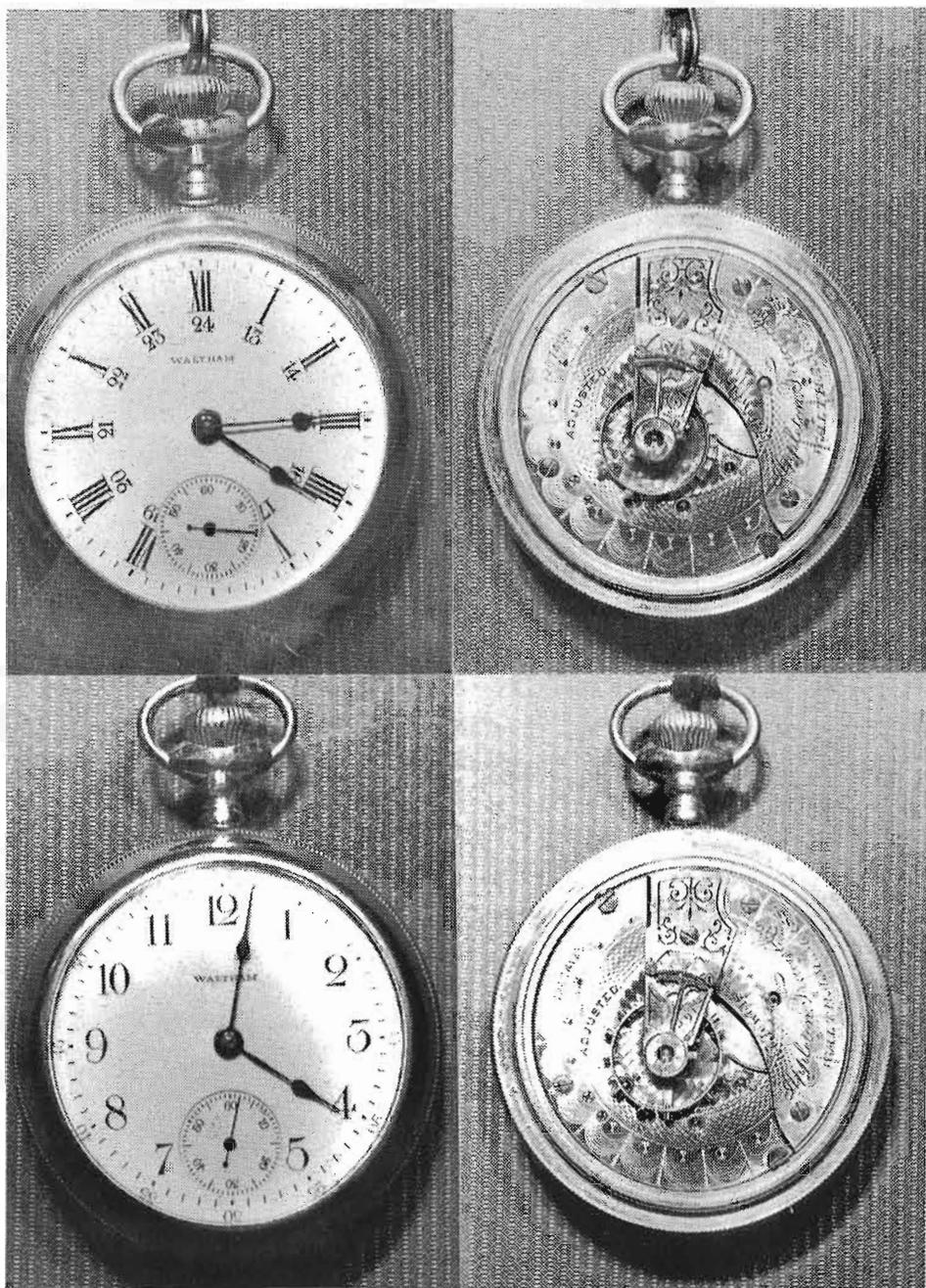


Waltham's answer to the new watch standards of the 1890's was the model 1892, designed from the start for railroad service. Shown here is No. 7,818,910 which was made in 1897. This watch is used by the author in regular service and can be depended on to keep time to within 30 seconds a month, even after 83 years service, a tribute to the workmanship of those days. (Photo by the author).

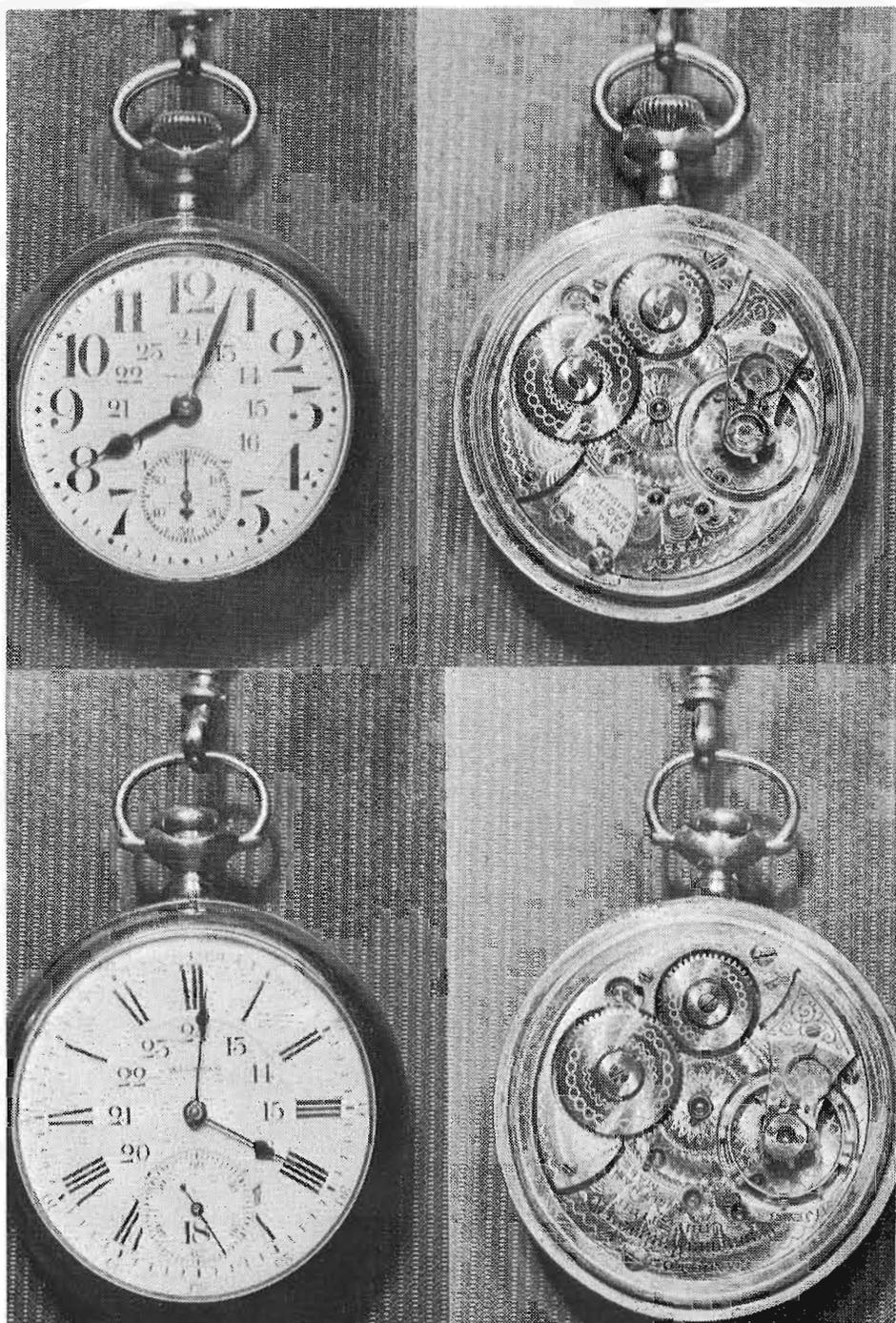
#### NOTES ON THE DATING OF WATCHES

It is quite difficult to tell the EXACT date of a watch, since this is seldom indicated on the movement. Furthermore, the case may well not be the original since watches were often re-cased at some later date. In the case of many American pocket watches this is not serious since the watch factory only supplied the movement, and the buyer selected the movement and case separately at the time of purchase. In the examples shown here the cases are of the same period as the movement and may be the original ones.

The serial number lists which exist for Waltham, Elgin, Hamilton and others indicate the type but not the exact date, however tables have been made which, though unofficial, are accurate to within a year or two, and these have been used in this article. The only exact official date found for any watch in this article was that for Hamilton No. 6218. Here the Hamilton records indicated that the watch was completed on December 12 1894 and shipped to the retail jeweller on February 27 1895, but this applies only to the movement and not the case.



Another pair of watches which are somewhat puzzling. Nos. 12,674,121 and 12,674,126 are supposed to be "C.P.R. Walthams" but are not, as can be seen. In fact one does not even have the 24-hour dial! Both are model 1883, and were made in 1904.



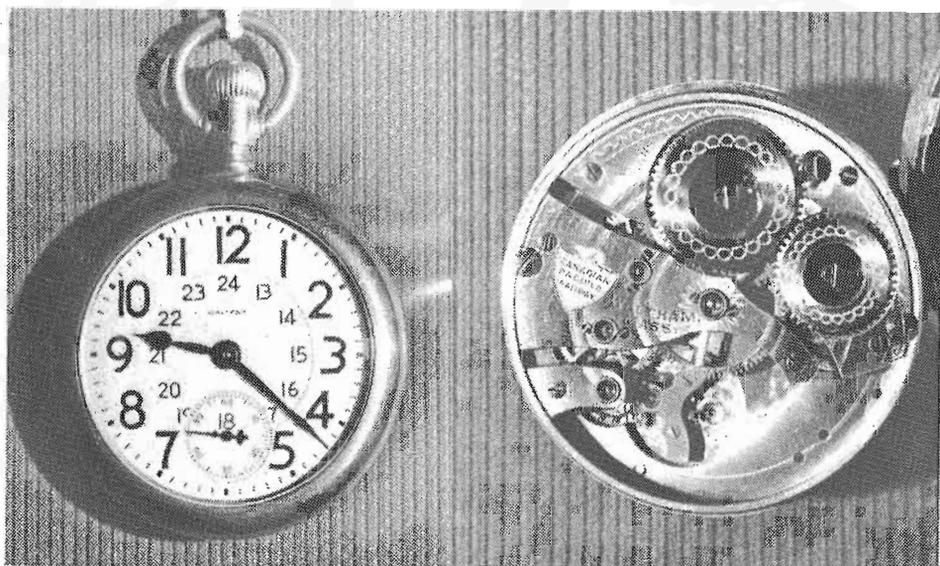
Two Waltham model 1892 watches made for service on Canadian Railways. Top is No. 20,000,132 produced in 1914 for the C.P.R. while bottom we see No. 19,086,086 made for Canadian Railway Time Service in 1913. Note the C.P.R. beaver and shield on the top one, while the bottom one shows the "C.R.T.S." inscription quite clearly.  
(Collection of L.O. Leach).

For the earlier English-made watches the story is somewhat different. Here there are few date tables existing due to the lack of records on the many small manufacturers. However, the cases here are usually original, being fitted when the watch was made and stamped with the same number as the movement. Since most cases were sterling silver, they were stamped with the official government hallmark, and, since this mark was changed every year, it is possible to date the case, and thus the watch, to within one year.

#### A U T H O R ' S   N O T E

The author would like to thank all who helped in supplying information for this article. Special thanks go to those who allowed me to photograph watches in their possession, thus providing illustrations without which the story would have been much less interesting.

The author would much appreciate hearing of any C.P.R. or C.R.T.S. watches with serial numbers not reported above, as well as watches in the reported ranges which are not C.P.R. or C.R.T.S. This would help to clear up the rather complicated numbering systems used, and help towards the compiling of a more complete "roster". The information required is the name and serial number stamped on the back plate of the movement (note that this is not the number on the case), the name on the dial,

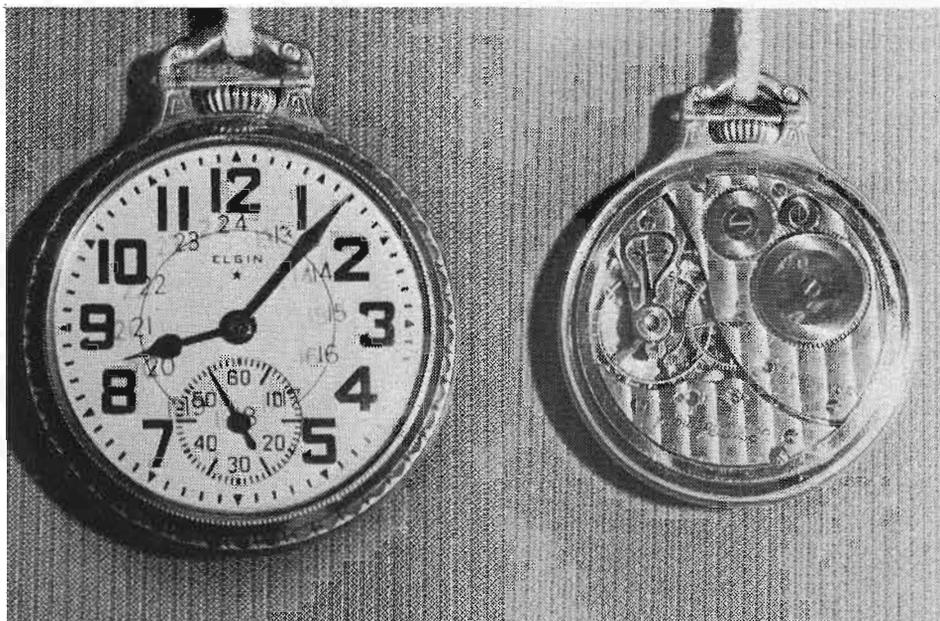


The major watch companies started manufacturing a smaller size watch (known as "16-size") for railroad service as early as 1899. However no distinctly Canadian "16-size" watches appeared until 1911 when Waltham began to make both "C.P.R." and "C.R.T.S." watches of their model 1908, which was very similar to their model 1899. No. 22,294,005 is a model 1908 C.P.R. Waltham produced in 1918, only two years before C.P.R.-marked watches were discontinued. No watches smaller than "16-size" were made for railroad service during the pocket-watch era, but this size is now the only pocket watch size presently approved for railroad service.

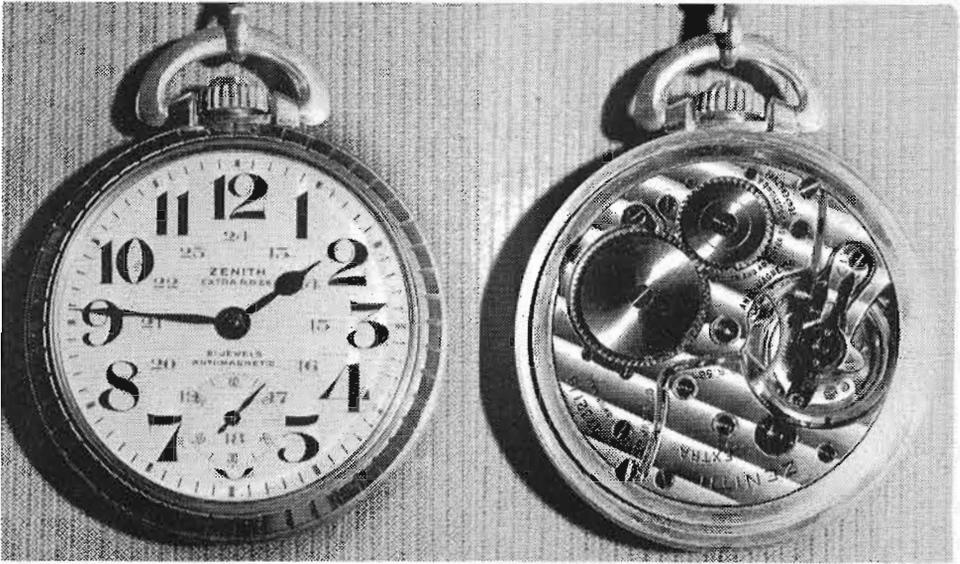
whether the watch is lever-set or pendant-set, and, if possible, the model of the watch. The latter can be found by comparing to the photos in this article. The type of case would also be useful to know although the case number is not related to the movement number. At present, the only C.P.R. or C.R.T.S. watches known are made by Waltham and are of models 1883, 1892, and 1908. Any further information would be very welcome as there are bound to be more surprises in the complex story of Canadian railroad watches.

#### NOTE ON MATERIAL USED FOR WATCHES

Expressions such as "Gold Watch" tend to be misleading, as this refers only to the case and not to the movement. The usual material used for watch movements until the 1880's was gilt brass. After about 1888 most railroad-grade watches were made of nickel or nickel-alloy, although some lower grades continued to use gilt brass until about 1920. All post 1888 watches illustrated here have nickel movements.



A more recent railroad watch design, Elgin No. 30,366,448 was made in 1927, but is still capable of passing railroad inspection. Note that the grade name "B.W. Raymond", introduced in 1867 and shown on No. 2042, is still used. The numerals 13 to 24 are on the inside of the watch crystal to adapt it for Canadian service. (C. De Jean).

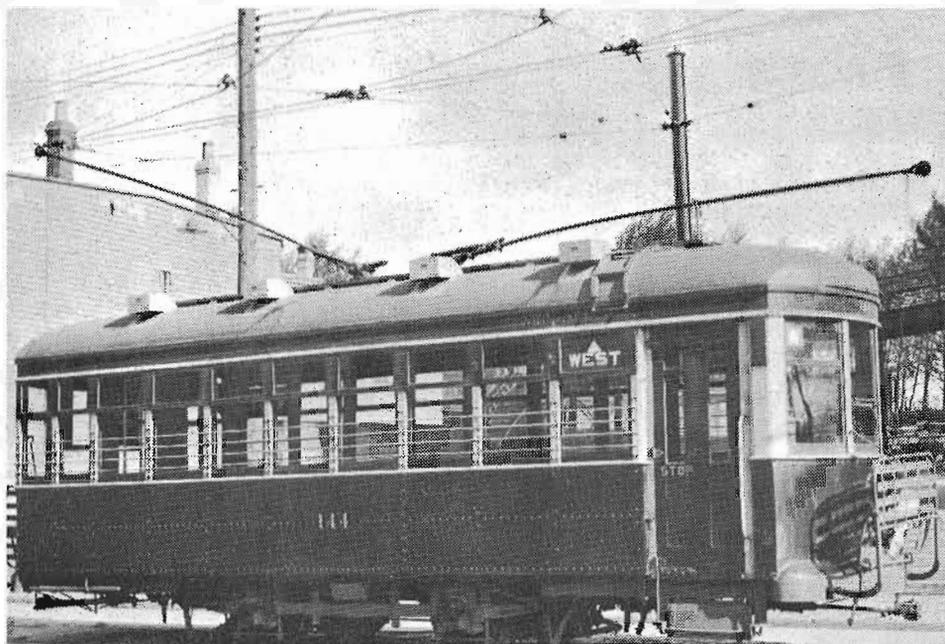


The final development of the railroad pocket watch in Canada is exemplified by swiss-made Zenith No. 4,732,118, made about 1960. Watches of this type are still regularly in service, but most new railroad watches are now the wrist type. (C. De Jean).

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# The acquisition of Saint John street cars by Jim Sulis

Following the end of the Second World War, it became evident that the street railway systems of North America were considered to be inefficient in view of the popularity and apparant ease of becoming the owner of an automobile. In preparation for the obvious increase of motor vehicles, serious consideration was given to discontinuing street railway service. Such was the case in Saint John N.B. and in 1947 a local company, which had been operating the inter-city bus routes in New Brunswick, decided to enlarge their system by applying for the franchise of bus transportation in the port city. It was an odd, but common, sight to see former street car motormen taking bus-driving training in the city while a few of the street cars still operated.



Time was when the little 130-class cars were new, and that was the time when the photographer took this photo of No. 144, fresh out of the shop, in 1929. (N.B. Hydroelectric Power Commission).



A car of the 130-class on Saint John's famed King Street hill on June 28 1947. The old Royal Hotel and M.R.A.'s department store, seen in the background, fell victim to the wreckers in 1973. (Photo by A. Clegg).

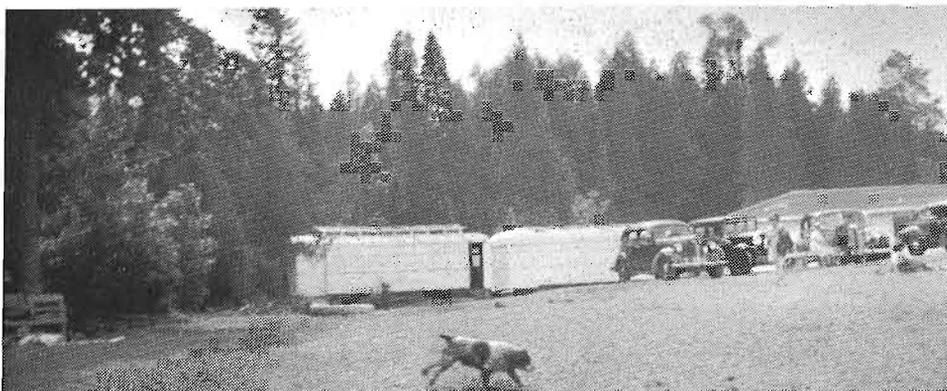
Eventually the old New Brunswick Power Company lost the franchise, and on Saturday, August 7 1948 the last run of a street car in New Brunswick took place. The last run was made by car 142, and when it completed this run it was the end of street car service which had begun in Saint John in 1869.

After the demise of the street railway, the disposition of the cars was in order. When all salvageable valuables had been removed the bodies were put up for sale. Their final destination was varied. Two (car 80 and a 106-class car) were used as "change houses" at Gondola Point, outside Saint John. Two others (of the 106-class) were joined side-by-side to provide housing for a family at Prince Of Wales. One (122) is visible as an integral part of a canteen in the western outskirts of the city. One (106-class) was used by an elderly man to house his tools etc. Car 130 was burned, while 140 was abandoned at a place called "Five Fathom Hole"; even a snow plow served a relatively poor family in the area of the airport.

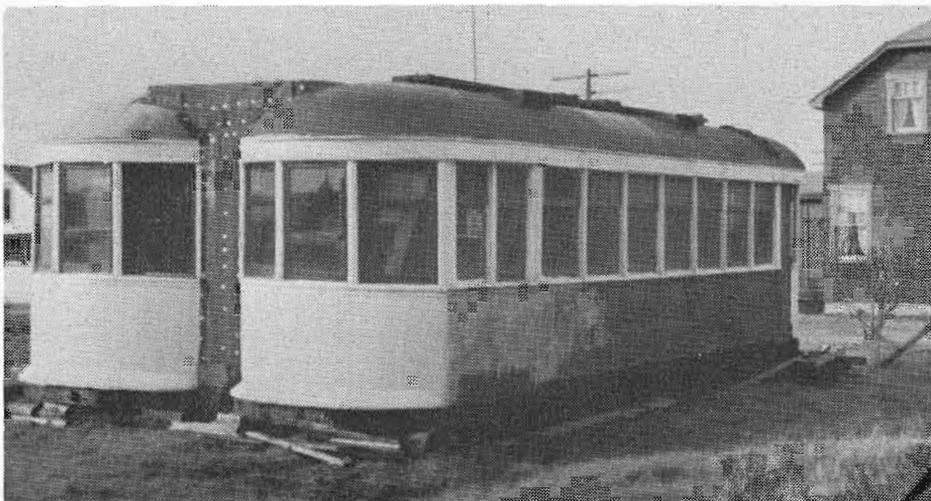
Nine of the cars, however, were obtained by Dexter Construction Company and placed side-by-side to provide storage space for tools and the like. Of these nine, eight (132, 134, 136, 138, 142, 144, 146, 148) were of the 130-class built locally between 1925 and 1929, while one (No. 116) was built by the Tillsonburg Electric Car Co. in Tillsonburg Ontario in 1914.

When, early in 1980, interest was shown by a small group in an effort to obtain the cars, an association was formed which became a part of the national body of the Canadian Railroad Historical Assn. Some of the members were interested in the "steam" era, and others in rehabilitating a street car for exhibition.

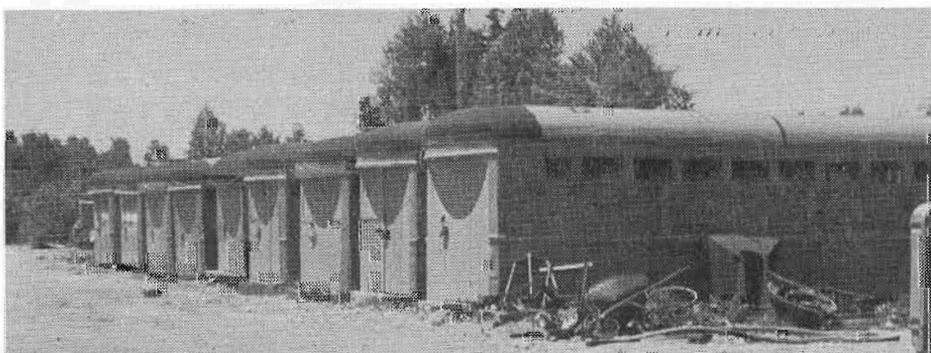
When Dexter's ceased operation in Saint John, their Halifax office was contacted by Jim Sulis to see if they would consider donating one or all of the cars to the street railway division. The foreman, Lou Adshade, gave Jim permission to remove all the light fixtures to prevent their loss to possible vandals. Unfortunately, before negotiations could be finalized, cars 136 and 142 (the latter having been the last car to operate) were destroyed by bulldozers grading the area. Abel Bastarache just happened to look in on the



Car 80 and an unidentified 106-class car are shown here in 1948 doing duty as changing rooms at Gondola Point beach. These cars were burned about 1951. (Photo by Fred Angus).



Two 106-class cars, built originally by Tillsonburg in 1914, are seen here converted into a house at Prince Of Wales N.B. (Collection of R.D. Thomas).



The nine cars at Dexter's as they appeared soon after they were placed there in 1948. The two cars nearest the camera are Nos. 142 and 136 which were destroyed last winter.



The scene at Dexter's at 6:45 A.M. on Saturday June 7 1980 just before the big move got under way. The car nearest the camera is No. 144, the others being 146, 116, 134, 148, 132, 138. (Photo by R.D. Thomas).

cars and stopped the operators from damaging the rest. On March 20 1980, Dexter Construction confirmed that they were donating the remaining bodies to the Street Railway Division on condition that they be removed from the property as soon as possible.

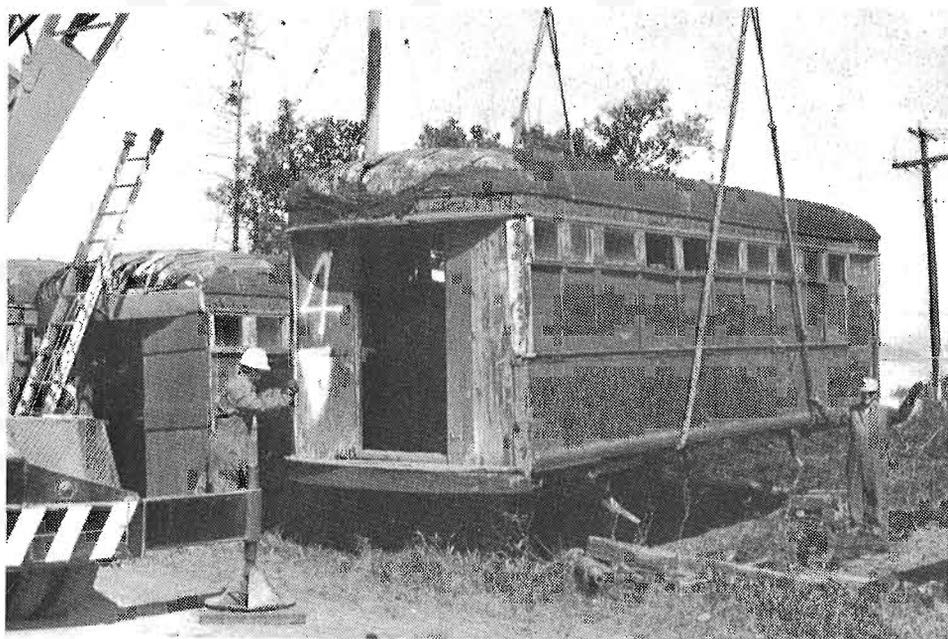
In mid-June, the Street Railway Division became part of the New Brunswick Division (#16) of the Canadian Railroad Historical Association.

While we were trying to locate alternative accommodations, Jim Brown, Abel Bastarache, Gordon Sulis, and Jim Sulis removed all the loose glass windows and miscellaneous fixtures to prevent damage during transit. Finally, after being offered two sites by the city and their cancelling the same before we could accept, and refusals from two private concerns, we were, through John Pollard's intercession, given the use of a part of Mackay Forest Products Limited lumber yard. With the assistance of Ken Harrington, J.D. Irving Equipment Division were persuaded to donate the use of a 25-ton mobile crane, with tractor and float, for the move.

On Saturday, June 7 1980, a crew comprising: Dyson Thomas (our division photographer), Jim Brown, Gordon Sulis, Abel Bastarache Ken Harrington, and Jim Sulis were on hand prior to the crane's arrival at 8:00 A.M. to assist the operators in moving. Charles Brown, Ron Farquharson, "Mitty" Robson, and Byron Thomas arrived shortly thereafter.



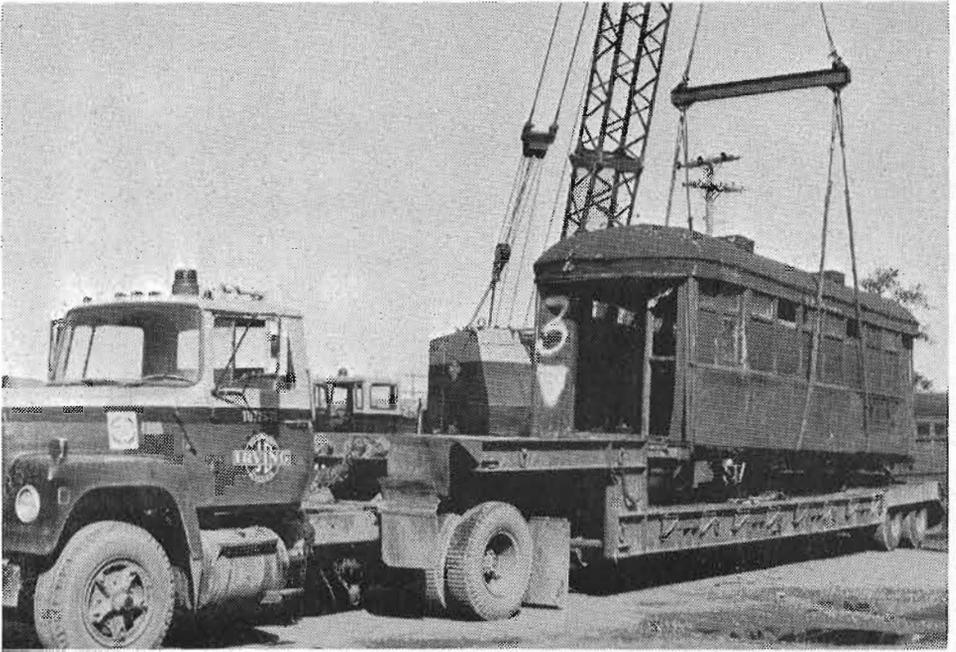
The interior of one of the 130-class cars just before being moved. The interior framing is visible and appears to be in good condition. (Photo by R.D. Thomas).



No. 134 is carefully lifted. Note the "rub-rail" at the bottom of the side to protect the car when in traffic. This car is in the best condition, and restoration will start with it. (Photo by R.D. Thomas).



A "lunch break" sees (left to right) Abel Bastarache, Gordon Sulis, M.L. Robson. (Photo by R.D. Thomas).



Tillsonburg-built No. 116, the oldest car in the lot (1914) is placed on the flat-bed. (Photo by R.D. Thomas).



Car 144 is safely loaded on the float and tied down for its first move in 32 years. (Photo by R.D. Thomas).

Car 144 was transported to the new site first, then cars 134, 146, 116, 148, 132. Jim Brown and Jim Sulis left with the first load to assist the two drivers of the fork-lifts, offered by Malcolm Mackay, in unloading and placing the cars on blocking. The move was completed by 3:20 P.M. Car 138 had to be left behind due to its location under power wires and general poor condition, the 'dozers having sheared off the end of it. It was stripped of usable parts.

Presently we are stripping car 146 for usable wood, and as an education in the car's original construction, since the floor frame assembly was not fit for renovation. The other cars are being secured by closing in doors and windows. The concensus is that car No. 134 is in the best condition for restoring as our first undertaking.



THE MOVE COMPLETED. CARS AWAITING RESTORATION.

#### BACK COVER

Back in 1939, operator Joseph Needham stood proudly in front of Saint John street car No. 106 which carried decorations for the visit of King George VI and Queen Elizabeth to Canada. This month Elizabeth, now the Queen Mother, celebrates her 80th birthday. Joseph Needham drove the last car to run in Saint John in 1948, and car 106 is long gone. However sister car, No. 116, has just been saved by the New Brunswick Division of the C.R.H.A.

(Photo from the collection of R.D. Thomas).

