The Carillon and Grenville Railway
Combination Car

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During the winter of 1914 to 1915 an old wooden railway coach, its trucks and undercarriage removed, was slid across the ice from Carillon, Quebec, over the frozen Ottawa River to Chute à Blondeau, Ontario. For almost sixty years this car would make a fine storage shed for a local farmer, Eugene St. Denis, and his descendents. The life of this "shed" could quite easily have ended on this farm, perhaps demolished and replaced by a new building at the farmer's will, or gutted by fire. Fate, though, allowed this car to survive until 1973 when rescued by the National Museum of Science and Technology; a truly valuable artifact that may be the oldest piece of railway rolling stock in the country. The number of this car is not known. In fact, little is known about the car except that it worked on the Carillon and Grenville Railway on the shores of the Ottawa River. It is not a certainty that this car came new to this railway.

In 1841 steamboat service was inaugurated on the Ottawa River between Montreal and Bytown (Ottawa until 1854). To travel from Montreal, passengers would take a steamboat to Carillon. There, because of a 12 mile stretch of rapids, portaging by stagecoach was necessary. Another steamer completed their journey from Grenville to Bytown.

In 1840 a charter was granted to build a portage railway between Carillon and Grenville. There was no progress and in 1847, a second charter was obtained. Again nothing materialized. By the early 1850s a group of prominent Montrealers were determined to open up commerce in the Ottawa Valley and funnel goods down by railway to the Grand Trunk. They organized the "Great Montreal and Ottawa Valley Trunk Line" made up of three smaller railways: the "Montreal and Bytown," the "Brockville and Ottawa," and the "Bytown and Pembroke."

The Montreal and Bytown Railway was supposed to start at Jacques Cartier Square in Montreal, go through a tunnel under Notre Dame Street, then head north parallel to St. Denis Street. It would cross the north river, pass through St. Martin, St. Eustache, St. Andrews, Carillon, Grenville and Hull. It would then cross the Ottawa River to Bytown.

In November 1853 the contract to build this line was given to James Sykes of Sheffield, England. The railway was to be built to the 5'-6" guage (railways had to be built to this guage to be eligible for Dominion government subsidies). It was decided that the Carillon to Grenville section should be completed first to replace the stagecoach journey past the rapids. On October 25th, 1854 this line opened and the first train was operated that day. Rolling stock that first year comprised one locomotive, two first-class coaches, four second-class coaches, two boxcars and two platform cars. It had cost $98,761 to complete this section of the line.[1]

In the spring of 1855 James Sykes was returning to Canada by ship, carrying with him funds to continue his various railway projects. The ship sank during a storm and Sykes lost his life. His brother William attempted to continue operation of the debt-ridden railroad. Soon both the railway company and James Sykes and Company went bankrupt. In 1855 the railway equipment was seized and stored for nearly a year. It was then entrusted by court order to the Wardens of the Counties of Ottawa and Argenteuil. The railroad resumed operation but not without financial disputes between bondholders and shareholders that would endure for four years.

In 1859 the line was sold at a Sheriff's sale to John J.C. Abbott, solicitor for the old company, and his associates. On May 4th of that year a new company was formed using the old name of "Carillon and Grenville Railway." In 1864 the Ottawa

River Navigation Company was formed by Captain R.W. Shepherd of the Ottawa Steamers Company. He and his associates purchased the Carillon and Grenville and ran it in much the same manner until 1907.

The railway operated only during the navigation season of the Ottawa River. When the steamboat from Montreal arrived at Carillon, passengers were transferred, and the train would leave for Grenville; here they would board another vessel for Ottawa. Travellers who had come on the boat from Ottawa would board the train for Carillon, from where they would sail once more for Montreal.

In 1907 the railway and the Ottawa River Navigation Company was bought by C.N. Armstrong, a railway promoter. In 1910 the line ceased operation because of financial and legal problems. In 1914 the line was bought by the Canadian Northern Railway to become part of their Montreal to Ottawa line. The engines and most of the cars (all broad guage and of no use to other railways) were sold to a scrap dealer in Montreal.

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At the time of the construction of the Carillon and Grenville Railway, in the 1850s, the eight-wheel passenger car had been well established in North America for about fifteen years.

> A typical car of 1840 had a rectangular body rarely over 30 feet long by 8½ feet wide. Before 1845 the glass windows were generally stationary, with sliding panels for ventilation. The ceiling was low, providing headroom of just over 6 feet. The seats were closely spaced and had narrow cushions and low backs. The trucks were on a short wheelbase. The total weight was about 8 tons.[2]

Cars increased in length somewhat by the mid-1840s; some were about 35 feet long. The moveable window was introduced,

and car builders began to install larger ones and more of them. Cars continued, though, to have low ceilings and narrow, cramped seating. Roofs now reached out over the end platforms. Most cars had very plain interiors using cheap woods, painted over. Ceiling bracing was sometimes left exposed and painted over. Some cars had seats made of leather or broadcloth, others were simply wood. Luxury cars were also built in this period, featuring mahogany paneling and plush velvet seats. At about 9½', they were about a foot wider than most cars.

Generally, pre-1855 cars were not solidly built. Many of the early 8-wheel cars used the floor frame as the main support for the body, usually a simple post and lintel arrangement. To each side was a 6X7 inch sill held together by cross timbers. The short car lengths of this period had not as yet necessitated centre-sills, truss-rods, or trusses within the lower body panels. The body was constructed of little more than thin horizontal and vertical pieces; there was no cross-bracing. This flimsy type of construction was popular to keep car weights and costs down. The light track of the day could not support heavy cars. Locomotives could only pull a limited weight. Interiors, with closely spaced seats, were designed to carry the highest number of people.

The late 1840s saw the development of newer designs to prevent sags in carbodies. Several cars built for the Cleveland, Columbus, and Cincinnati Railroad in 1849 had side sills with a slight upward camber or bow. The body was reinforced by glued continuous siding rather than the traditional small-panel siding.[3]

In the 1850s more trunk lines were opening; railway journeys were becoming longer. There came a demand for more passenger comfort. Cars became longer (up to 40 feet), with seven-

foot headroom. Stronger frame construction was required for these heavier cars. Consequently, the centre-sill was introduced. It comprised two to four timbers running under the centre for the full length of the body. Another very important advancement in wooden car construction occurred about this time. Bridge technology was applied to develop the side panel truss. This was built inside the lower body panel, comprised of many light pieces of wood. This reinforced the side-sills and obviated large floor timbers. On some cars the body truss consisted of a side-sill, and a horizontal cord (just under the window level). Both ran the full length of the body, and had diagonal bracing made of either wood or iron rod.

Throughout the 1850s the simple arched roof remained in style. This was to soon change to keep pace with the increasingly roomy interiors of that decade; in the early 1860s the clerestory roof was introduced. This type of roof had the centre portion raised up about 18 inches, the sides of which would have openings for air, or small glass windows.

The preceding summary of 1840s-1860s carbody construction is appropriate because, today, the body is all that the museum has of what was once a fully-operational passenger coach. The date built and builder are not known; the only way we can find a "slot" for this vehicle in the evolution of the passenger car, is through comparison of the museum's carbody with typical styles of certain periods. This comparison will be made shortly. Readers interested in other aspects of coaches of this period; truck styles, graphics, heating, seating styles, lighting and ventilating etc., are referred to documents in the accompanying portfolio.

Railway car building in pre-Confederation Canada was essentially an industry of carpenters, since wood was the principal raw material involved. During the railway building boom of

the 1850s, carriage builders naturally went into the business. Small foundry companies began producing the metal castings necessary for car construction. Most Canadian car plants of the last century were small enterprises dominated by one man, bringing his own skills as woodworker or foundryman to the business. The factory was usually set up where lumber was plentiful, and at the best price.

One such partnership might have fitted this description. That was the firm of Carmichael and Brown, located on Nazareth Street near Common Street in Montreal. It is not known how long this partnership was in business, but they were registered at this location in 1853 according to MacKay's Montreal Directory for that year.[4] As there was no entry for this firm in the 1852 directory, nor that of 1855-56, it seems likely that their business was quite short-lived. It is believed that the firm built two first-class coaches for the Grand Trunk Railway sometime in the 1850s, and 97 flatcars, 25 boxcars and 32 ballast cars in 1854 and 1855.[5]

It is known, though, that the partnership built at least one car for the Carillon and Grenville Railway by 1854. An account of the opening of this railroad published in the Montreal Gazette of October 14th, 1854 included the remark:

> The second class car was a strong, comfortable structure, crammed full of farmers and lumbermen; the first-class, a most comfortable--almost luxurious--carriage fitted up in first-rate style from the factory of Brown & Carmichael, of this city.[6]

It is indeed possible that the carbody at the museum today is one of the cars referred to in this article.

Another car builder of this period, Michael O'Meara, apparently built one first-class car for the GTR in 1852, along with 10 flatcars, 26 boxcars, and 10 others in 1854-55.[7] It

has been suggested to this writer that the Carillon and Grenville car, upon its arrival at the museum in 1973, was inspected, and had an O'Meara inscription inside the car, above the door leading from the passenger compartment to the outside.[8] An inspection of the car interior in March 1990 failed to turn up any sign of such a marking.

Another document that lends support to the theory that it was the Carmichael & Brown firm that built this car, was an article in the Canadian Magazine of February 1902. It gives an account of a passenger's ride on the Carillon & Grenville Railway in which the coach interior is decribed. The traveller remarks:

> "Carmichael & Brown, Makers, Montreal," is the inscription on the doors of the cars....I stepped into the smoker, and sat down by the window, a square of glass about two and one half by two feet. The smoker was a little box about seven feet by ten....The walls were made of tongued and grooved boards running longitudinally, and the roof was similarly built.[9]

The above description of the smoking room appears to match the arrangement of the small room on the museum's carbody. The interior of the car was divided so that about one-third was for passengers, the rest for freight. A bulkhead with door separated the two sections. The freight area had a large sliding door on each side. The car is still of this configuration. Unfortunately, one can only make assumptions regarding this car's heritage. The Carillon and Grenville Railway, as of June 30, 1909 (just over a year before the railway ceased operation) had five passenger cars on its roster.[10] Nobody can be sure that the museum's carbody was one of the two "Carmichael and Brown"-inscribed cars on the train the day of the passenger's journey.

It is also possible that there was at least one other combination car (part freight, part passenger) on the C&G in its later years. It is also believed that this car, like the one at

the museum, survived after the demise of the railway to become a farmer's shed (probably in the same area that the museum's carbody was found). In the 1930s C.L. Terroux and W.G. Cole of the Canadian Railroad Historical Association photographed both cars. The other carbody, although having differences in body styling, appears to be of the same coach-baggage configuration, including sliding doors.[11] This car appears to be the one shown in an in-service photograph of the Carillon and Grenville Railway, on a two-car train behind the engine.[12] This car may also be the one shown in a photograph accompanying the aforementioned Canadian Magazine article; if this picture was taken on the day of that author's journey, the museum's coach may not have been any of the cars on which he rode.[13] It is also possible, of course, that this latter photograph was a stock photo or postcard.

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The writer discussed the heritage of the museum's carbody with Omer Lavallée and James A. Shields, both noted Canadian railway and rolling-stock historians. They believe, for several reasons, that this coach is of the 1850s. The small dimensions of the car (carbody length, 39'-6"; width, 9'-8") were typical of the 1850s; by the 1860s longer lengths for passenger coaches were becoming popular. There is also the belief that the car was substantially rebuilt at some period, likely in the 1860s. The clerestory roof with the flat ends (the current configuration of the car, and as seen in photographs of the Carillon and Grenville Railway) was not typical of clerestory roofs applied to new cars beginning in the 1860s; they usually had rounded ends. This suggests that the car was probably built with an 1850s-style arched roof, and that the flat-ended clerestory, although well constructed, was a home-made job added later. The small windows on the car were typical of the 1850s when car construction practices dictated that the side frame of the car

was built first, then windows fitted in where possible. It was not until the 1870s that cars were designed with large windows, and then the framework designed to accommodate them.[14]

The Carillon and Grenville roster of the late 1850s showed that the railway had both first-class and second-class cars.[15] First-class cars of the period usually had windows spaced next to every seat or every second seat. On second-class cars there were larger spaces between each of the windows along the side, similar to the spacing of windows on the museum's carbody. This car has six windows along each side (actually five windows and a sliding door). The possibility exists that this car was a second-class coach, and that during rebuilding, one window was simply replaced with a sliding door. The spacing between the windows, including to the center of the sliding door, appear to be about equal.

It is also possible that the car was a first-class coach, and that during rebuilding, selected windows were filled in with sheathing. Removal of this sheathing and inspection of the framing, might offer clues as to the previous configuration of the sides. To this writer, it would seem logical to choose a second-class coach for transformation to a combination car, rather than a first-class one that had probably cost more to have built and might still have contained finishings of higher quality. The railway, of course, may have had good reasons to choose a first-class car for this conversion.

When new this car would not have had tongue-and-groove siding; use of this did not appear on cars until the 1860s. Instead, it would have had a board-and-batten siding. This comprised flat boards with the joints hidden by thin batten strips. It is not known whether this car had or has a side panel truss beneath the sheathing. If it had been built with such trusses, later during installation of the sliding side doors,

it would have been necessary to cut these trusses, possibly leading to a sag in the body. "In-service" photographs of the car show no apparent sag. These photographs also show that the car was fitted with truss-rods; these would not have been on the car as built, but added most likely in the 1860s or 1870s.

Another feature of the roof is noteworthy (possibly dating from the same time as the c.1860s roof-rebuilding). The roof has a nine-inch overhang along the carbody sides, that it would not have had when new. Underneath this are wooden block braces spaced every three to four feet. This style of bracing was not a railway practice, but a marine one, appearing on the deck-houses of ships etc.[16] It is possible, then, that carpenters of maritime experience, probably from the Ottawa River steam-boat company, worked on the railway rolling stock as well. One might theorize that the whole roof rebuilding (including the installation of the clerestory) was undertaken by such workers, and, as mentioned earlier, was indeed a home-made job.

In 1973 the National Museum of Science and Technology acquired this carbody from the St. Denis family, supposedly for the price of a replacement shed for the farmer. The car was moved to the museum on a flat-bed truck, and has been in storage since then. It is unfortunate that there is no clear evidence, at this time, to firmly say who built the Carillon and Grenville coach. What little evidence there is appears to point to Carmichael & Brown; one can only make assumptions. The Carillon and Grenville was little more than a railway run by farmers. Probably little or no equipment records were kept during their operating years, and when the railroad closed, what records they had were destroyed.

One can take comfort in the tremendous amount we **do** know about this artifact: We know on what railway it ran, what guage it was, the type of people who rode on it, we even have photo-

graphs of the car in service. We can also be reasonably certain, supported by the opinions of rolling stock historians who have inspected it, that it is most likely a product of pre-1860 car construction.

END NOTES

1. Brown, Robert R., *The Last Broad Guage,* (Montreal: The Canadian Railroad Historical Association, 1966), 7.

2. White, John H. Jr., *The American Railroad Passenger Car,* (Baltimore and London: The John Hopkins University Press, 1978), 20.

3. Ibid., 22.

4. *MacKay's Montreal Directory,* (Montreal: Robert W.S. MacKay, 1853.

5. Merrilees, Andrew, *The Railway Rolling Stock Industry in Canada: A History of 110 Years of Canadian Railway Car Building,* Document compiled by Mr. Merrilees, May 1963. A search of the Merrilees collection in the Public Archives of Canada failed to find his source for this information.

6. *Montreal Gazette,* 14 October, 1854.

7. Merrilees.

8. Recollections of Omer Lavallée, historian, who inspected the Carillon and Grenville car at the time of its removal to the museum.

9. McBride, W.D., "Passenger Carriages Past and Present," *The Canadian Magazine of Politics, Science, Art and Literature, VOL. XVIII,* (Toronto: The Ontario Publishing Co. Ltd., February 1902), 312-13.

10. *Poor's Manual of Railroads, No. 43,* (New York: Poor's Railroad Manual Co., 1910), 1773.

11. W.G. Cole photograph, (1930s). NMST collection. Mr. C.L. Terroux is shown standing in front of the other C&G carbody that was extant until at least the 1930s.

12. Photograph, NMST collection.

13. McBride, 308.

14. Lavallée recollection.

15. Board of Railway Commissioners of the Province of Canada, *Report of Samuel Keefer, Esq., Inspector of Railways,* (Hamilton: Gillespy & Robertson, 1859).

16. Lavallée recollection.