

PUBLISHED BI-MONTHLY BY THE CANADIAN RAILROAD HISTORICAL ASSOCIATION PUBLIE TOUS LES DEUX MOIS PAR L'ASSOCIATION CANADIENNE D'HISTOIRE FERROVIAIRE



CANADIAN RAIL



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FRONT COVER: May 2, 1995, exactly one month before the retirement of the old commuter equipment, car 6735 brings up the rear of a Montreal-bound multiple-unit train as it passes Val Royal. Today, Val Royal station is only a memory, and 6735 is far away in South Carolina. However 1914 locomotive 6710 has now been placed on display at Deux Montagnes, as we see on page 110. Photo by Fred Angus

BELOW: A CPR train, consisting of a locomotive, a baggage car and two coaches, is seen near Ste. Agathe Que. about 11:15 A.M. on a summer day in 1898. The train would have left Place Viger station at 8:25 A.M., and was due at Labelle at 1:00 P.M. "Art Work on Montreal" by W.H. Carre, 1898.

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United States: \$31.00 in U.S. funds. Other Countries: \$40.00 U.S. funds.	Remember "Knowledge is of little value unless it is shared with others".	DISTRIBUTION: Joncas Postexperts Inc.



The Blue LRC - La LRC Bleue

by - par: Hugues W. Bonin

On the longest day of 1981 (21 June), I was in Montreal and, as usual for this time, I made a detour up to Dickson Street to check what was going on at the Bombardier locomotive plant (the former Montreal Locomotive Works plant). From the parking lot under the Dickson Street viaduct, one could see on that day two brand new LRC (Light - Rapid - Comfortable) locomotives more or less hidden by some clutter spread on the plant's grounds: blue VIA 6900 in front of grey VIA 6904. You have read it correctly, as on that day, the 6900 sported a dark blue livery quite reminiscent of British Rail's HST trains. The well known VIA Rail livery of dark blue, grey and yellow were tried on the 6900, but, except for minor details, the blue and the grey were reversed, making the appearance of the 6900 much different than that of the 6904 and the other LRC locomotives. The front end of the 6900 had more yellow, with this colour reaching the level of the coupler and ditch lights. Another difference was that the front windows of the 6900 were not outlined with black and appeared smaller.

Having never seen pictures of the blue 6900 in trains magazines, nor read any references to this livery, I must conclude that the 6900 wore this colour scheme for only a very short time. Some letters and phone calls made to VIA Rail and Bombardier failed to provide me with more information on issues such as the individuals who conceived this paint scheme and the reasons why the predominantly grey livery was retained for the LRCs. My personal guess is that the blue livery was too close to the colour scheme of the older FP7As, FP9As, FPA4s and their "B" sisters, and that VIA wanted to outline the introduction of the new LRC service with a strikingly different livery, not unlike the Turbo Trains which wore a special yellow colour scheme. I hope that some readers of Canadian Rail will provide additional information on the blue livery of the 6900 and, perhaps, better photographs.

It is hard to realize that the LRC train concept is already 25 years old. In the 1970s, a group of Canadian companies, Montreal Locomotive Works (MLW), Aluminum of Canada Ltd (Alcan), and Dominion Foundry and Steel Co. (Dofasco), conceived the Light-Rapid-Comfortable (LRC) train. The LRC logo was well suited for the French language as well, standing for "Léger-Rapide-Confortable". At that time, fast lightweight trains were already operating or being constructed in several countries, such as the Shinkansen in Japan, the High Speed Train (HST) in the United Kingdom, and, of course, the TGV (Train à Grande Vitesse) in France. The LRC concept was based on diesel-electric propulsion with a sophisticated banking system for the cars to ensure the comfort of the passengers in the curves of the existing track network for which the LRC was designed to operate safely at speeds up to 125 mph (202 km/h). A version of the LRC train based on straight electric propulsion was also planned at the time.

A first LRC test car and an LRC experimental locomotive were built at the MLW plant in the Spring and Summer of 1973. The locomotive, numbered JV-1 (JV for "Joint Venture"), was mostly aluminum grey with scarlet red on the nose and pilot, and had huge black LRC letters on the sides. The model was designated "M429LRC" by MLW, and as LRC (A) by the rail press. The engine was the rugged 12-251F Alco-designed diesel engine, rated at 2,900 hp at 400-900 rpm. Weighing 236,000 lbs (about 107 metric tonnes), the JV-1 had a length of 67' 11" (20.7 m) and

Le 21 juin 1981, le jour le plus long de l'année, je me trouvais à Montréal et, selon l'habitude du temps, je fis un détour jusqu'à l'usine de locomotives de Bombardier de la rue Dickson, l'ancienne usine de la Montreal Locomotive Works. Deux locomotives LRC flambant neuves de VIA Rail étaient visibles du stationnement sous le viaduc de la rue Dickson: la VIA #6900 bleue devant le 6904 grise. Vous avez bien lu: la 6900 était, cette journée-là, effective-ment bleue, la livrée étant constituée surtout de bleu foncé, de jaune et de gris, évoquant les trains HST de la British Rail. Cette livrée était essentiellement la présente livrée des locomotives LRC de VIA Rail, mais avec le bleu et le gris inversés, sauf pour quelques détails mineurs. Cependant, l'apparence de la 6900 se trouvait fort modifiée. Le devant de la 6900 avait plus de jaune, cette couleur atteignant le niveau de l'attelage et des phares d'appoint. Une autre différence était que les pare-brise n'étaient pas accentués de noir, comme c'est le le cas des LRC présen-tes, ce qui rendait ces fenêtres d'apparence plus petite.

N'ayant jamais vu de photographie de la 6900 bleue dans les revues ferroviaires, ni lu d'anecdote sur cette livrée, il me faut conclure que la 6900 n'a arboré ces couleurs que quelques jours tout au plus. Plusieurs lettres et appels téléphoniques aux relations publiques de VIA Rail et de Bombardier n'ont pas permis d'en apprendre davantage sur cette livrée et ses concepteurs, ni sur les raisons motivant le choix de la présente livrée où le gris prédomine. Des spéculations plus ou moins hasardeuses de ma part suggéreraient que la livrée bleue ne se distinguait pas assez de celle qu'arboraient les anciennes locomotives héritées du Canadien National et du Canadien Pacifique (de modèles FP7A, FP9A, FPA4 et leurs soeurs "B") et que VIA Rail désirait souligner l'introduction du nouveau service LRC avec une livrée spéciale qui frapperait l'imagination du public, tout comme on l'avait fait pour les trains Turbo dont la livrée était d'un jaune vif. J'espère que les lecteurs du Rail Canadien pourront éclairer notre lanterne sur ces questions troublantes et, peut-être, nous envoyer de meilleures photographies de la LRC bleue.

Il est difficile de réaliser que le concept du train LRC a déjà plus de 25 ans. En effet, au début des années 1970, les compagnies canadiennes Montreal Locomotive Works (MLW), Aluminum of Canada Ltd (Alcan) et Dominion Foundry and Steel Co. (Dofasco) forment un consortium pour concevoir le train Léger-Rapide-Confortable ou LRC, le sigle convenant tout aussi bien à la langue de Shakespeare: "Light-Rapid-Comfortable". À cette époque, il y avait déjà des trains rapides et légers en service ou en chantier dans plusieurs pays, tels que le Shinkansen du Japon, le "High Speed Train" au Royaume-Uni, et, bien entendu, le TGV (Train à Grande Vitesse) en France. Le concept du LRC était basé sur la propulsion diésel-électrique, avec des locomotives légères, et des voitures pourvues d'un système sophistiqué d'inclinaison assurant le confort des voyageurs dans les courbes de la voie ferrée existante: en effet, le LRC était conçu pour utiliser des voies ferrées ordinaires jusqu'à 202 km/h (125 mph). Une version du LRC à propulsion entièrement électrique était aussi prévue à l'époque.

Une locomotive expérimentale, de même qu'une voiture LRC, furent construites aux ateliers de la MLW au printemps et à l'été de 1973. La locomotive qui arborait le numéro JV-1 ("Joint Venture - 1") était peinte presqu'entièrement de couleur aluminium, avec quelques accents de rouge vif à l'avant, et présentait les lettres géantes "LRC" en noir sur ses flancs. La locomotive



VIA Rail LRC locomotives 6900 (in blue) and 6904 (in grey) at Bombardier's ex-Montreal Locomotive Works plant on Dickson Street, Montreal, Québec, on 21 June 1981. Photo by Hugues W. Bonin.

Les locomotives LRC de VIA Rail 6900 (en bleu) et 6904 (en gris) aux ateliers de Bombardier (ex-Montreal Locomotive Works) de la rue Dickson, Montréal, Québec, le 21 juin 1981. Photo par Hugues W. Bonin.

a height of 11' 9" (3.6 m), and was equipped with four-wheel Dofasco DFP-B trucks, a G771A main generator and 4-752E8 traction motors with a gear ratio of 71:32 permitting a 120 mph(192 km/h) speed with 40" (1.02 m) wheels.

The locomotive and its LRC car were extensively tested in the following years, notably on the Canadian National main line west of Montreal, on Amtrak's North-East Corridor and at the U.S. Department of Transportation test facility at Pueblo, Colorado.

In November 1976, it was reported that Amtrak was negotiating for a trial lease of two LRC train sets made of one locomotive and five cars each. Eventually, the negotiations came to a positive outcome and MLW outshopped Amtrak locomotives 38 and 39, Model M437 between March and May 1979, as per order M6107. A strike delayed the delivery and the two locomotives accompanied by the 10 cars (numbered Amtrak 40 to 49) joined the Amtrak roster some eight months later than planned. These two locomotives were referred to as LRC (B) and were shorter than the LRC (A) demonstrator by 32" (81 cm). They were equipped with a 16-251F engine producing 3,750 hp (some sources state 3,725 hp), the power shared between propulsion and "hotel power" for the train. The trains were tested briefly on Canadian National's main line between St. Lambert and St. Hyacinthe, Que., then more extensively on Amtrak's network in the Boston, Massachusetts, and the Jacksonville, Florida, areas. Some overheating problems were reported, but they were apparently fixed quickly.

At about the same time (early 1980), VIA Rail placed two orders with Bombardier (who had bought MLW in 1979) for LRC equipment, for a total of 22 locomotives (order M6109 for 5 locomotives, and M6110 for 17 more locomotives). The total was reduced by one locomotive, and 10 LRCs were built in 1981 and 11 était désignée du modèle "M429LRC" par la MLW, et "LRC (A)" par la presse ferroviaire. Le moteur était un robuste 12-251F de conception Alco, produisant 2,900 cv à 400-900 tours par minute. Pesant 107 tonnes métriques (236,000 lbs), la JV-1 avait une longueur de 20.7 m (67' 11") et une hauteur de 3.6 m (11' 9"), et était pourvue de bogies à deux essieux Dofasco DFP-B, d'une génératrice principale G771A et de moteurs de propulsion 4-752E8 dont le rapport d'engrenages de 71:32 permettait une vitesse de 192 km/h (120 mph) avec des roues de 1.02 m (40") de diamètre.

La JV-1 et sa voiture furent testés intensivement au cours des années suivantes, notamment sur les voies du Canadien National à l'ouest de Montréal, dans le corridor nord-est d'Amtrak, et aux installations du Département américain des transports de Pueblo, Colorado.

On rapporta en novembre 1975 qu'Amtrak était à négocier la location de deux trains LRC constitués chacun d'une locomotive et de cinq voitures afin d'en faire l'essai. Ces pourparlers s'avérèrent bientôt fructueux et, en mars et mai 1979, la MLW construisait les locomotives Amtrak #38 et 39, de modèle M437 (commande #M6107). Une grève retarda la livraison du matériel roulant durant environ huit mois, mais Amtrak finit par recevoir les deux locomotives de même que les dix voitures LRC #40 à 49. Les locomotives étaient connues comme des LRC (B) et étaient plus courtes que la LRC (A) JV-1 de 81 cm (32"). Leur moteur était un diésel 16-251F

produisant 3,750 cv (certaines sources citent une puissance de 3,725 cv). Cette puissance était partagée entre la propulsion et la fourniture d'énergie électrique pour alimenter les voitures. Les trains furent mis à l'essai brièvement sur la voie du Canadien National à l'est de Saint-Lambert, puis essayés de manière plus poussée sur les lignes d'Amtrak de la région de Boston, Massachusetts, et celle de Jacksonville, Floride. On rapporta quelques problèmes de surchauffe mais il semble que l'on apporta rapidement les correctifs appropriés.

À la même époque, au début de 1980, VIA Rail envoya deux commandes à la compagnie Bombardier qui venait d'acheter la MLW en 1979 pour s'équiper de trains LRC: la commande #M6109 pour cinq locomotives et la commande #M6110 pour 17 autres locomotives. Le total de 22 locomotives fut réduit à 21 peu après, et Bombardier construisit 10 locomotives en 1981 et les 11 autres en 1982. Ces locomotives étaient numérotées VIA Rail #6900 à 6920. Elles étaient semblables aux deux LRC d'Amtrak, et leur modèle fut appelé LRC-2. Cependant, l'équipement électrique des locomotives d'Amtrak n'était pas compatible avec celui des locomotives de VIA Rail. Avec les locomotives, VIA Rail se procura cent voitures LRC en deux groupes: le premier groupe de voitures numérotées #3300-3349 fut livré des ateliers de La Pocatière en 1981-1982, tandis que le second groupe de voitures (#3350-3399) fut construit en 1984. En 1985, les voitures coach #3375-3399 furent converties en voitures Club et renumérotées #3451-3475, leur capacité s'en trouvant réduite, passant de 72 passagers à seulement 54.

Tout comme pour les LRC d'Amtrak, les LRC de VIA Rail furent mises à l'essai sur les voies du Canadien National à l'est de Saint-Lambert, Québec, et Bombardier effectua de nombreuses modifications avant la mise en service de l'équipement LRC dans le corridor Toronto-Windsor le 1ier juin 1982. Le service LRC s'étendit peu après à tout le corridor Québec-Windsor, et



VIA Rail LRC locomotives 6900 (in blue) and 6904 (in grey) also at Bombardier's ex-Montreal Locomotive Works plant on Dickson Street, Montreal, Québec, on 21 June 1981. One can see the trucks from the experimental LRC locomotive, the JV-1, on the flat car at the right of the picture. Photo by Hugues W. Bonin.

: Les locomotives LRC de VIA Rail 6900 (en bleu) et 6904 (en gris) aussi aux ateliers de Bombardier (ex-Montreal Locomotive Works) de la rue Dickson, Montréal, Québec, le 21 juin 1981. On peut voir les bogies de la locomotive expérimentale LRC JV-1 sur le wagon plat à la droite de l'image. Photo par Hugues W. Bonin.

in 1982, these being numbered VIA Rail 6900-6920. These locomotives were quite similar to the two Amtrak LRCs, and the model was eventually designated LRC-2. However, the electrical system in the Amtrak equipment was so much different than the one in the VIA Rail's equipment that they were not compatible for joint operation. Along with the locomotives, VIA Rail acquired from Bombardier's La Pocatiere plant 100 LRC coaches in two batches, 3300-3349 built in 1981-82 and 3350-3399 built in 1984. In 1985, coaches 3375-3399 were converted to Club Car configuration (54 passengers capacity, down from 72) and renumbered 3451-3475.

VIA Rail's LRC equipment was tested on Canadian National's lines south-east of Montreal, and Bombardier had to make numerous modifications before the trains entered service in the Toronto-Windsor corridor on 1 June 1982. Soon after, VIA Rail ordered ten more LRC locomotives, 6921-6930, for delivery between June 1983 and mid-1984. These are designated LRC-3, rated at 3,700 hp (2,700 hp for traction), but geared for 103 mph (167 km/h), whereas the LRC-2, also rated at 3,700 hp, had initially a maximum speed of 125 mph (202 km/h). All the VIA LRCs were later restricted to 95 mph (153 km/h) resulting from a series of ailments and failures which started early in their career. Troubles were reported as soon as 1983 with locomotive 6906 being destroyed at Glencoe, Ontario, by a fire. It was eventually retired and scrapped. At about this time, the 6909 had a main generator explosion, and the 6915 was damaged by fire as a result of a colVIA Rail commanda aussitôt dix autres locomotives LRC, les #6921-6930, dont la livraison était prévue entre juin 1983 et la mi-1984. Ces locomotives étaient dénommées LRC-3, de puissance de 3,700 cv, mais construites pour une vitesse maximale de 167 km/h (103 mph), alors que les LRC-2 avaient initialement une vitesse maximale de 202 km/h (125 mph) et la même puissance de 3,700 cv, dont 2,700 cv étaient pour la propulsion. Toutes les locomotives LRC de VIA Rail furent modifiées par la suite pour une vitesse maximum de 153 km/h (95 mph), à la suite de problèmes mécaniques qui firent leur apparition tôt dans leur carrière.

On rapporta des défaillances aussi tôt que 1983, alors que la 6906 fut détruite par un incendie à Glencoe, Ontario, et fut mise à la retraite puis envoyée à la ferraille. À la même époque, la 6909 subit une explosion de sa génératrice, et la 6915 fut endommagée par un incendie à la suite d'une collision. Le 21 juin 1984, le train 46 (Ottawa-Toronto) constitué de la locomotive LRC 6910 et de quatre voitures entra en collision avec deux wagons sur la voie de garage de Kott Lumber, un marchand de bois de Nepean, Ontario. Cet accident résultait d'un acte de sabotage de la part de vandales qui avaient détourné un aiguillage. Vingt-sept voyageurs furent blessés (blessures mineures heureusement), et la 6910 fut envoyée aux ateliers de Moncton du Canadien National pour y être réparée et elle fut remise en service le 7 juin 1985.

Quant aux locomotives LRC d'Amtrak, elles furent retournées à Bombardier en mai 1982, et tout service LRC d'Amtrak prit fin le 4 juillet 1983, les dix voitures étant elles



VIA Rail LRC locomotives 6904 and 6915 in storage at the SEPTA plant in Ville Saint-Pierre, Que., on 22 October 1990. Photo by Hugues W. Bonin.

Les locomotives LRC de VIA Rail 6904 et 6915 entreposées aux ateliers de la compagnie SEPTA de Ville Saint-Pierre, Québec, le 22 octobre 1990. Photo par Hugues W. Bonin.

l'atelier de la rue Dickson durant plusieurs années. La #38 conserva l'essentiel de la livrée d'Amtrak (blanc accentué de bleu et de rouge), mais la #39 fut repeinte entièrement en bleu pâle, sans aucune inscription. Éventuellement, la #38 fut renumérotée #2100, puis #6941 lorsqu'elle fut acquise par VIA Rail comme source de pièces de rechange avec la #39 qui fut renumérotée #6942. À la fin de 1990, la #6941 et la

lision. The LRC equipment soon became the mainstay of the Windsor - Quebec City corridor. On 21 June 1984, train 46 (Ottawa -Toronto), consisting of LRC 6910 and four cars, collided with two bulkhead flat cars and a box car on a siding at Kott Lumber in Nepean, Ontario, the accident being caused by vandals. Twenty seven passengers received minor injuries and the 6910 was subsequently repaired at the Moncton Shops of Canadian National and returned to service on 7 June 1985.

As for Amtrak's LRCs, the two locomotives were returned to Bombardier by May 1982 and all Amtrak LRC service ended by 4 July 1983 with all 10 cars also returned to Bombardier. The locomotives languished at the Dickson Street plant for several years. The 38 remained in Amtrak's colours (mostly white with some red and blue), but the 39 was eventually painted all light blue without any markings. The 38 was renumbered 2100, then 6941 when it was acquired by VIA Rail as a source of spare parts along with the 39 which was renumbered 6942. By the end of 1990, both the 6941 and 6942 were sold to Saturn International, c/o Century Locomotive Co. of Lachine, Que.

In September 1984, the LRCs had their hour of glory when a 10-car train was used for transporting Pope John-Paul II from Sainte-Anne-de-Beaupre to Canadian Pacific's Windsor Station in Montreal, via the Shrine at Cap-de-la-Madeleine. Locomotives 6927 and 6922 (elephant style) led the train which consisted of "new" LRC cars. of which coach 3373 was specially outfitted for the Pope. Locomotive 6921 was pushing on the rear of the train. An 8-car LRC train made up of "old" LRC cars, and powered by locomotives 6907 and 6915 transported the media.

The career of the LRC locomotives continued during the 1980's with a series of mechanical failures and some mishaps, as the LRC trains dominated the Quebec-City-Windsor Corridor service. The reliability of the locomotives was rather disappointing and, at the same time, the VIA Rail maintenance personnel were blaming the high technological complexity of the equipment for the many failures, and Bombardier was arguing that VIA Rail was not maintaining the equipment properly. The love story with the LRC locomotives ended quite soon and, by the end of 1984, several of the locomotives appeared neglected with their yellow #6942 furent vendues à la compagnie Saturn International, a/s Century Locomotive Co. de Lachine, Québec.

C'est en septembre 1984 que les LRC eurent leur heure de gloire alors qu'un train LRC de dix voitures servit au déplacement du Pape Jean-Paul II de Sainte-Anne-de-Beaupré à la Gare Windsor de Montréal, en passant par le Cap-de-la-Madeleine. Les locomotives #6927 et #6922 menaient le train (accouplées en style "éléphant") qui était constitué des "nouvelles" voitures LRC dont la #3373 avait été spécialement réaménagée pour le Pape. La locomotive #6921 poussait à l'arrière du train. Un autre train LRC composé de huit "vieilles" voitures LRC et mû par les locomotives #6907 et #6915 servait au déplacement des média.

La carrière des locomotives LRC se poursuivit au cours des années 1980 marquée de plusieurs pannes et accidents, alors que l'équipement LRC fournissait la plus grande partie du service dans le Corridor Québec-Windsor. La fiabilité des locomotives LRC laissait à désirer et le personnel d'entretien de VIA Rail blâmait la grande complexité technologique de l'équipement pour les nombreux problèmes techniques, tandis que Bombardier soutenait que le personnel technique de VIA Rail n'effectuait pas l'entretien du matériel de manière appropriée. La lune de miel entre VIA Rail et les locomotives LRC fut plutôt brève et déjà, vers la fin de 1984, plusieurs des locomotives avaient une piètre apparence avec leur nez jaune ayant tourné au rose au point que certaines locomotives, comme la 6909, étaient surnommées "Miss Piggy".

Au début de 1985, VIA Rail débuta l'exploitation des "Trains J" (i.e. trains joints) qui étaient deux trains LRC accouplés ensemble pour la partie commune de leur trajet. Par exemple, un "train J" LRC était formé d'un train Toronto-Montréal et d'un train Toronto-Ottawa accouplé à l'arrière, et cela jusqu'à Brockville où l'on découplait les trains qui poursuivaient chacun leur route vers leur destination respective. Les "trains J" n'avaient qu'un seul équipage pour leur trajet commun, qui contrôlait les deux trains à partir de la locomotive de tête. Typiquement, un de ces trains avait une locomotive LRC en tête, suivie de neuf ou dix voitures, puis de deux locomotives LRC attelées nez à nez, ellesmêmes suivies de quatre ou cinq voitures. Ce mode d'exploitation dura un peu plus d'une année alors que l'on réalisa chez VIA Rail



VIA Rail LRC locomotive 6909 hauling VIA train #52 "York", at its stop at Kingston, Ontario, on 23 December 1995. Photo by Hugues W. Bonin.

La locomotive LRC de VIA Rail 6909 propulsant le train #52 "York" de VIA Rail, à son arrêt de Kingston, Ontario, le 23 décembre 1995. Photo par Hugues W. Bonin.

nose fading to a pink colour, hence the "Miss Piggy" nickname for some of the LRCs such as the 6909.

In early 1985, VIA Rail started operating the so-called "J-Trains" ("Joint trains"), which were two trains coupled together for the common part of their run. As an example, a Toronto-Montreal LRC train would have a Toronto-Ottawa LRC train coupled to its rear end up to Brockville where the trains were uncoupled to continue to their respective destinations. The "J-Trains" were operated with only one crew controlling all the locomotives for the common part of their itineraries. A typical consist would have one LRC locomotive followed by nine or ten cars, two LRC locomotives coupled nose-to-nose, then four or five more cars. This operation lasted about a year as VIA Rail felt that the time spent in coupling and uncoupling the trains away from the shops was hurting the marketing of the Corridor service.

While the LRCs were restricted to the service within the Corridor, some of them were used to haul the "International", a joint Amtrak-VIA Rail service between Chicago and Toronto. Since the Amtrak maintenance facilities in Chicago were not equipped to repair the LRC locomotives, only basic maintenance could be done by Amtrak's technical personnel unfamiliar with the Bombardier technology. This aggravated the ailments of the LRCs, which were soon replaced with Amtrak equipment, then by the new VIA Rail GMD F40PH-2 which were delivered starting in 1986. When VIA Rail formally acquired the two Amtrak que le temps nécessaire aux opérations d'accouplement et de désaccouplement des trains loin des ateliers ne favorisait pas le marketing du service dans le Corridor.

Contrairement à l'impression générale, les LRC n'ont pas été restreintes au Corridor Québec-Windsor. En effet, certaines locomotives ont tiré les trains du service "International" exploité conjointement par VIA Rail et Amtrak entre Toronto et Chicago. Comme les ateliers d'entretien d'Amtrak à Chicago n'étaient pas équipés pour effectuer des réparations majeures sur l'équipement LRC, seul l'entretien minimal de base pouvait être fait à Chicago par un personnel technique peu familier avec la technologie de Bombardier. Ceci n'aida guère à prévenir les nombreuses pannes et les LRC furent bientôt remplacées par des locomotives et des voitures d'Amtrak, puis par des nouvelles F40PH-2 dont VIA Rail prit livraison à partir de 1986. Lorsque VIA Rail fit l'acquisition des deux locomotives LRC d'Amtrak à la fin de 1987, il acquit aussi les dix voitures LRC qui furent envoyées à l'usine de Bombardier de La Pocatière pour y être reconstruites pour le service "International" reliant Toronto à Chicago. À leur mise en service, ces voitures étaient numérotées dans la série des 3500 et étaient aisément reconnaissables à leurs fenêtres séparées verticalement en leur milieu. Cependant, ces voitures n'étaient toujours pas compatibles électriquement avec les autres voitures LRC de VIA Rail, et, lorsqu'on cessa de les utiliser pour le service "International" en mars 1993, on planifia de modifier leur système électrique afin de les rendre compatibles avec le reste de la flotte, mais les voitures furent simplement entreposées.



6914 hauling VIA train No. 53 at Brockville, Ontario on October 8, 1997. Photo by Fred Angus

locomotives in late 1987, it also took possession of the ten LRC coaches which were sent to Bombardier's La Pocatière Shop for refurbishing for the "International" service. The cars emerged as the 3500-series and were easily recognized with their vertically split windows. A more implicit feature was that they were still not electrically compatible with the rest of VIA Rail's LRC fleet. These cars were removed from the "International" service in March 1993 and plans were made to make them compatible with the other LRC equipment. However, diminishing financial resources precluded this and the cars were stored instead.

Several events affected the LRC fleet in the beginning of the 1990s. The performance of the new F40PH-2 turned out to be far more superior to that of the LRC locomotives, so that the first 30 F40PH-2s delivered in 1986 and 1987 were joined by 29 new sisters in 1989. In addition, these F40PH-2 were built such as to be compatible with the LRC equipment, so they can replace LRC locomotives on LRC trains. In early 1990, the Mulroney government decided to cut several of the long-distance VIA Rail trains and also many trains in the Corridor. This meant the end of the acquisition program of bi-level "Superliner" type long-distance passenger cars, and VIA Rail embarked on a program to refurbish the stainless steel "Canadian" cars and to replace their steam heating equipment with electrical heating and air conditioning. The program was later expanded to include several stainless steel cars bought second hand from Amtrak and other sources.

Even if this forced the FPA4s/FPB4s and almost all the FP9As/F9Bs into retirement, VIA Rail found itself with more than enough HEP-equipped locomotives for its needs, so that most of its LRC locomotives were mothballed for future uses and stored at or near the Montreal Maintenance Facility. At the present time (Summer 1998), only seven of the 31 LRC locomotives are in service (6902, 6905, 6907, 6914, 6917, 6919 and 6921), all assigned to Montreal for maintenance. Two are officially retired: the 6906 (1985) and the 6920 (1996), plus, of course, the two ex-Amtrak units (6941 and 6942). The 6920 and coach 3349 were destroyed by fire in a spectacular "accident" that occurred at Brighton, Ontario, on 20 November 1994 when train 66, the "Me-

Au début des années 1990, plusieurs événements influencèrent la carrière des trains LRC. Les locomotives F40PH-2 performaient nettement mieux que les LRC et les trente premières F40PH-2 reçues entre 1986 et 1987 furent bientôt rejointes par 29 autres soeurs livrées par General Motors en 1989. De plus, ces F40PH-2 ont été construites de façon à être compatibles avec l'équipement LRC, pouvant de ce fait remplacer les locomotives LRC à la tête des trains LRC. Au début de 1990, le gouvernement Mulroney décida d'abolir plusieurs trains de VIA Rail, y compris certains trains du Corridor Québec-Windsor. Au même moment, on annula le programme d'acquisition de voitures à impériale du type "Superliner" pour les trains à longs trajets, et VIA débuta un important programme de reconstruction des voitures inox du "Canadien" afin de remplacer le système de chauffage à la vapeur par un système de climatisation électrique. Ce programme fut prolongé éventuellement pour inclure plusieurs voitures inox achetées aux États-Unis.Ceci sonna la mise à la retraite de toutes les vieilles locomotives FPA4, FPB4 et F9B, ainsi que de presque toutes les FP9A, et malgré cela, VIA Rail se trouvait avec un surplus de locomotives pour assurer le service maintenant réduit. Il s'ensuit que la plupart des locomotives LRC furent mises "dans la boule à mites" pour utilisation future, et entreposées à l'atelier de VIA Rail de Montréal ou dans les environs. Au moment de l'écriture de cet article (été 1998), on ne trouve que sept locomotives LRC en service actif: les numéros 6902, 6905, 6907, 6914, 6917, 6919 et 6921, toutes entretenues à Montréal. Il n'y a que deux locomotives LRC officiellement retraitées: la 6906 (en 1985) et la 6920 (en 1996), en plus, bien sûr, des deux LRC d'Amtrak (#6941 et 6942).

La locomotive 6920 et la voiture 3349 furent détruites par le feu dans un accident spectaculaire qui se produisit le 20 novembre 1994 à Brighton, Ontario, lorsque le train #66 ("Métropolis") heurta à 162 km/h (100 mph) un bout de rail placé sur la voie ferrée par de jeunes vandales. Le bout de rail perfora le réservoir de mazout de la 6920 qui se trouva aussitôt entourée de flammes qui enveloppèrent aussi les premières voitures. Heureusement il y eut beaucoup plus de peur que de mal malgré le fait que plusieurs des passagers furent blessés, mais on n'a pas eu à déplorer de mortalités. L'accident a eu un impact médiatique incontesté et VIA Rail eut à souffrir de la mauvaise publicité.

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In 1998 the LRC locomotives still soldier on. This winter view of 6905 was taken at Drummondville, Que. on March 3, 1998. Photo by Fred Angus.

tropolis" (Toronto-Montreal), hit at 100 mph (162 km/h) a piece of rail placed on the line by vandals. As a result, the fuel tank of the locomotive was ruptured and the fuel ignited, engulfing the locomotive and the first cars in an inferno causing several injuries (fortunately no fatalties) and giving VIA Rail a lot of negative publicity in the media. The 6920 was later sold to Century Locomotive Parts in Lachine, Que. for scrap.

It may be expected that the LRC locomotives will be around for a while, unless the stored units deteriorate beyond economical repair. In late 1993, VIA Rail was considering converting one of the LRC locomotives to gas turbine propulsion and talks were then held with Textron Inc. of Providence, Rhode Island, U.S.A. However, nothing came out of this project as VIA Rail was now more concerned with the shrinking financial support from the Canadian Government.

The LRC car fleet is well appreciated by the public for their comfort, and even if they had some mechanical troubles in the past with their banking system and their wheels (all the cars had to be removed from service from December 1983 to April 1984 to have bearing problems fixed), they now provide most of the service within the Corridor. As for the LRC locomotives, they are a regular feature on Montreal-Toronto trains "York" and "Metropolis", as well as on some Montreal-Québec City trains. It seems that the VIA Rail maintenance crews have now mastered the complexity of the advanced technology of the LRC, ensuring a satisfactory reliability. It is thus expected that, considering the reduced budgets of VIA Rail, the LRC locomotives which were victims of serious mechanical failures or accidents will simply be replaced with sisters taken out of storage, so that these unique locomotives may well be running for many more years. Éventuellement, la locomotive 6920 (ce qui en restait) fut vendue pour la ferraille à la compagnie Century Locomotive Parts de Lachine, Qué.

On peut s'attendre à ce que les locomotives LRC demeurent en service pour plusieurs années encore, à moins que les locomotives entreposées ne se détériorent au point de ne plus être réparables. À la fin de 1993, VIA Rail envisageait de convertir une de ses locomotives LRC à la propulsion par turbine à gaz, et des pourparlers furent tenus à ce sujet avec la firme Textron Inc. de Providence, Rhode Island, États-Unis. Cependant, à ce jour, il ne s'est rien concrétisé de ce projet alors que VIA Rail est davantage préoccupé par ses ressources financières qui s'amoindrissent.

Les voitures LRC sont bien perçues du public voyageur pour leur confort et elles continuent d'assurer la grande majorité du service dans le Corridor malgré les problèmes passés avec leur système d'inclinaison et leurs roues (on se rappelle que toute la flotte avait dû être temporairement retirée du service de décembre 1983 à avril 1984 pour remédier à un problème de coussinets).

Quant aux locomotives, elles sont des habituées sur certains trains entre Montréal et Toronto ("York" et "Métropolis"), ainsi que sur plusieurs trains entre Montréal et Québec. Il semble bien que le personnel technique de VIA Rail soit parvenu à maîtriser la complexité de la technologie avancée du LRC, assurant une fiabilité satisfaisante. L'avenir semble donc être qu'en raison des budgets réduits accordés à VIA Rail, les locomotives LRC victimes de bris mécaniques et d'accidents sérieux pourraient être simplement remplacées par des soeurs présentement entreposées, ce qui signifie que les locomotives et voitures LRC devraient continuer de silloner le réseau ferroviaire du Corridor Québec-Windsor pour de nombreuses années.

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This is a time of many centennials. As the nineteenth century drew to a close, there was an unprecedented number of significant events and innovations relating to the railways of Canada. In particular, 1898 was a very important year which included such milestones as the rebuilding of the Victoria bridge, the start of construction of the White Pass & Yukon Route, the building of the railway through the Crow's Nest Pass, to name just three. In the last issue we considered the centennial of the diesel engine, in this issue we will consider four centennials, and later we plan a feature on the Victoria Jubilee Bridge, the White Pass, and the Hochelaga car barn fire.

One centennial not so well known is that of one of the first, if not the first, practical use of electricity to light passenger cars in Canada. In 1898 the CPR equipped its sleeping car "Winchester" with a dynamo-electric lighting system; this is said to be the first railway car in Canada to be lighted electrically. Later that year it used the same system in its new series of elegant sleeping cars which bore names of chateaus in France. This method of lighting was used for 100 years, sometimes with belts and sometimes with gears, and is still in use on much passenger equipment. Only in recent years has it largely been superseded by head end power generators in the locomotives. Even this method was thought of in 1898 but was dismissed as impractical in the age of steam. The Railway and Shipping World, in its issue for September, 1898, had the following article. Evidently the publishers of that magazine had some doubts as to the practicability of the scheme, as witness the caveat at the end of the article. However, as it turned out, the basic method was practical after all.

Electrical Lighting of Cars.

Three methods of lighting cars by electricity have so far been adopted. The most extensively developed method heretofore employed is where a dynamo in the baggage car, run by steam from the locomotive, generates an electric current which is carried through the train by wires extending from car to car. This plan requires the constant attendance of an electrical engineer & has been found so expensive as to be impracticable. Another method now in use is that of a simple storage battery in each car. This, however, is both expensive & unsatisfactory, because the batter-



ies must be removed at each terminal & recharged from a central electric plant. The weight of the batteries, the fact that the light is likely to diminish as the storage is drawn on, the labor of changing & cost of changing them, together with the necessity of confining the runs to the terminal points where there are charging stations, add to the cost & difficulties of this system.

At one time & another a number of inventors have given more or less attention to the possibility of utilizing the motion of the wheels of railroad cars for the generation of electricity for lighting the train to which such cars belong, but until recently it could not be said that any very satisfactory results had been attained, & even now it is doubtful if any system has been so perfected as to warrant its general adoption. Some months ago the C.P.R. Co.







from a small but powerful set of storage batteries supplied for the purpose. Any battery capicity is supplied to take care of the lights during all ordinary & reasonible delays, during stops, slow-downs or casulties. Any capcity can be supplied, but ordinarily and dependent upon the number of lights used there is enough for from five to fifteen hours of lighting in the battery supply.

Everything connected with the system is entirely automatic. The porter is given no instructions, beyond being told to turn the lights on when he wants them & turn them off when they are no longer required. We give illustrations of the device as applied to the *Winchester*. The cuts are so clear that technicians should be able to understand them at once. Another feature of this system is that in running during the daytime when the batteries are full, the very act of turning off the lights cuts down the

equipped its sleeping car, *Winchester*, with a system, & it has since been put in the 10 magnificent sleeping cars, of which the *Chantilly* was the first turned out.

This system consists of a dynamo mounted upon the truck of the car, one end of which is supported by a stirrup from the truck, & the other by the axle. It is driven by a direct gear which revolves usually at the rate of 2 1/2 to 1 revolution of the car wheel. The part resting on the axle rests on a split sleeve, supported by the axle. This split sleeve finds its bearings by means of adjustable jaws, so arranged as to take up any irregularity of the axle, & they engage close to the wheels, leaving the central parts of the axle free to spring rounding curves & going over irregularities in the road & centering the weight where it is least felt. A peculiar feature, of this system is the regulating device. Although the speed of the train may reach great extremes of variations, & the dynamo

being directly geared would generate great extremes of current, the regulator is so arranged by a system of resistance wires that the current is kept substntially uniform during all the variations of speed between 20 miles an hour & the maximum ability of the locomotive. In other words, although the dynamo at a speed of 60 miles an hour is revolving 3 times as fast as it does at a speed of 20 miles an hour, the amount of current generated is the same. In connection with this there is an automatic cut-out so adjusted as to throw the dynamo into circuit with the lamps upon its reaching a potential equal to that of a small storage battery supply, & throw it out of circuit upon its dropping below. The effect of this is that when the lamps are & burning and the train running at 20 miles an hour, the lamps are fed directly from the dynamo, & a small surplus of current goes through the batteries. When the speed falls below 20 miles an hour the cut-out works automatically, & as long as it continues at its low rate of speed, the lights are drawn direct



efficiency of the dynamo to the point where it generates only the current necessary to pass through the batteries, in order to keep them in the best of condition. Should it be desirable, as it very frequently is, to introduce electric fans into the sleeping car during the hot months, as soon as those fans were brought into play the current generated by the dynamo would be sufficient to keep a large number of them in operation, if required, while yet serving the batteries with all that they require.

The foreging description is compiled from material supplied by the owners of the system, & we do not accept any responsibility for the claims therein made, or necessarily endorse them.

Of the illustrations accompanying this article the 1st shows the regulating device, the 2nd & 3rd give different views of the axle device & the 4th & 5th explain themselves.

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A RECENT GRAND TRUNK MOGUL TYPE LOCOMOTIVE.

Grand Trunk Mogul 901 when new. It was built by Baldwin (construction number 15659) in January, 1898, was renumbered 1375 in 1910, and became CNR 661 in 1923. It was scrapped in December 1927. The Railway and Shipping World, December 1898.



Grand Trunk Locomotives.

F.W. Morse, Superintendent of Motive power, writes The Railway & Shipping World: "The G.T.R.system is now receiving from the Baldwin Locomotive Works 6 mogul locomotives & 4 10-wheelers, & a duplicate order from the Schenectady Locomotive works. At present we are not building in Montreal, but may do so before the end of the year".

The 10-wheel passenger engines are illustrated above. In designing these new classes of locomotives the intention has been to combine the best features of a number of recent designs; & the details have received unusual attention, both from Superintendent Morse &, from the manufacturers, & such parts have been made especially substantial, while passenger & freight locomotives are designed for particular classes of service, yet parts which will require repairs & renewals are the same for both engines, which undoubtedly will reduce considerably the cost of maintenance.

The passenger engines have a greater total weight than the freight engines of 14,500 lbs., but less weight on the drivers by 3,000 lbs.; the passenger engines also have larger driving wheels & a longer boiler, the latter resulting in a slightly greater heating surface for the 10-wheel locomotives. The diameter of the boiler & the dimensions of the fireboxes are the same for both classes.

The Railway and Shipping World, April 1898.

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CPR's Compound Ten Wheelers of 1897-98



In the 1890s there was a great deal of effort being expended to increase the efficiency of locomotives. One method was compounding, in which there were high-pressure and low pressure cylinders; the steam exhausted from the former was used again in the latter, so getting more work from steam that would otherwise have been wasted. In September and October, 1897, the CPR purchased a number of Vauclain Compounds from Baldwin, completed them in the Delorimier Shops, and placed them in service in 1898, exactly 100 years ago. These were known as Vauclain balanced compounds which were distinguished from ordinary compounds in that there was both a highpressure and low-pressure cylinder on each side, connected to each crosshead. In the ordinary compound locomotive, the high-pressure cylinder is on one side and the low pressure on the other. This can lead to unbalanced operation. The Railway and Shipping World for March, 1898 (and illustration in the June 1898 issue) reported the following:

Canadian Pacific Locomotives.

The C.P.R. Co. is adding about 50 compound consolidation locomotives to its equipment, 27 of which are being fully built at the Company's works, De Lorimer [sic] Avenue. Montreal, under the supervision of Mechanical Superintendent Atkinson. It is estimated these will haul 25 to 30% more load than the 10-wheelers.

An Order has been placed with the Baldwin Locomotive Works, Philadelphia, Pa., for 10 complete & 10 partially constructed Vauclain system, compound locomotives of the following general dimensions:

> Gauge: 4' 8 1/2". Type: Compound Ten-wheeled. Cylinders: H.P 13 1/2" X 24" L. P. 23" X 24' Valves: balanced piston. Boiler diameter: 56". Thickness of sheets: 11/16" &, 3/4". Working pressure: 200 lbs. Fuel: Soft coal. Firebox material: steel. Firebox length: 96 1/2". Firebox width: 42 1/2" Firebox depth: front 62 1/8", back 52 1/2"" Thickness of sheets: sides 3/8"". back 3/8". crown 1/2". Thickness of tubes: 1/2".

Tubes, number: 223. Tubes, diameter: 2". Tubes, length: 12' 7 5/8". Heating surface, firebox: 119.51 sq ft.. Heating surface, tubes: 1,494.99 sq. ft. Heating surface, total: 1,614.50 sq. ft. Grate area: 28.51 sq. ft. Driving wheels, outside diameter: 62". Driving wheels, centre diameter: 56". Driving journals: 8" x 8 1/2". Truck wheels: 28" diameter. Truck journals: 5" x 8". Weight on drivers: about 96,000 lbs. Weight on truck: about 32,000 lbs. Weight, total engine: 128,000 lbs. Weight, total engine & tender: 208,000 lbs. Wheelbase, driving: 13' 5". Wheelbase, total engine: 23' 11 1/4". Wheelbase, total engine & tender: 48' 3 1/2". Tender truck Wheels, diameter: 33". Tender truck journals: 4 1/4" X 8". Tank capacity: 32,000 Imperial gallons. Weight empty: about 35,000 lbs. Service: passenger & freight.

Mr. Atkinson writes us that the partially constructed locomotives will be completed at the C.P.R's. Montreal shops. They are being supplied without cabs, boiler mountings, boiler covering, sand boxes, bells, stacks, headlights, smokebox fronts, smokebox nettings, tubes, pilots, ashpans. grates & tenders complete, & are virtually boilers, frames, cylinders, wheels & motion.

Early in the twentieth century it was found that the extra complexity of compounding was not justified by the saving of steam. Accordingly, about 1909, these engines were converted to simple. The group was retired between the late 1920s and mid 1930s. No. 482, later 480 and finally 380, was scrapped in July, 1933.

Now for a look at a satire on these innovations of the 1890s, turn the page!

The Centennial of Gilderfluke's Perfected Locomotive

In keeping with our observance of important railway centennials, we cannot overlook this important, if tongue-in cheek, invention! The last issue of Canadian Rail pointed out the great increase in thermal efficiency as a result of the adoption of diesel power by the railways. The consequent reduction in operation expense undoubtedly saved many railways from abandonment. However all this might have been unnecessary if history had taken a slightly different course. A hundred years ago a marvelous locomotive was invented by an unsung hero, Eli Gilderfluke. This wonderful machine promised, among many other things, a coal-burning efficiency of 120%, which would have turned the railway's motive power into a coal producer instead of a coal consumer. In short, it would revolutionize the railways! Since nothing more was heard of this invention, we can only conclude that the major locomotive builders, fearful of being put out of business, quickly bought up all the Gilderfluke patents and consigned the whole project to oblivion.

All kidding aside, though, the following article actually <u>did</u> appear in the prestigious magazine "Locomotive Engineering" in its issue of December, 1897. It was published like any other article, with no indication that it was a spoof; however it was obvious from the very start that it was highly satirical, and written with tongue very much in cheek.

The 1890s were a time of many changes in railway operation in general and locomotive design in particular. This was the first decade when electric power became a practical consideration as a means of main-line motive power, and this decade marked the beginning of the long battle for supremacy between steam and electric (and later diesel-electric) power. This battle continued for about sixty years and ended in the almost complete defeat for steam. In its struggle for improvement, locomotive designers introduced many innovations. This included compounding (powering a low-pressure cylinder with steam exhausted from a smaller high-pressure cylinder), larger numbers of driving wheels, unfamiliar wheel arrangements, more efficient valve gear, electric light and such esoteric, but never used, devices as Napoléon Prince's double-piston steam engine (see Canadian Rail No. 463). The locomotive built in 1897 was a completely different machine from the small 4-4-0 of twenty years before. Changes were coming so fast that it was hard to keep up with them. Accordingly someone at "Locomotive Engineering", perhaps even Angus Sinclair, the publisher, evidently decided to write a humorous article about a locomotive that might result if these innovations continued unabated. The result was worthy of Rube Goldberg or Heath Robinson! Did anyone notice that the motion of the driving wheels, as drawn, is impossible? Such strange-sounding terms as "carbowallop" and "frugoeconomiter" did not sound much more unfamiliar than the "carburetor" and "economiser" of the coming internal combustion engines. New technology creeps into the Gilderfluke description. The most obvious is electricity, but notable also is the use of X-rays, discovered only two years before, in November 1895.

We hope you will get as much of a laugh from this description as your editor had in rescuing it from the fragile, yellowed pages of a hundred year old magazine. The complete article has been reprinted almost entirely verbatim. So, without further ado we present for your enjoyment that marvel of the 1890s, Gilderfluke's Perfected Locomotive!

THE GILDERFLUKE LOCOMOTIVE

By Eli Gilderfluke

The appalling wastes and extravagances incident to the operation of the steam locomotive have ever been the subject of much fruitless wrangling and soul-harrowing argument, tending in the direction of matters of trivial import and along traditionally beaten paths.

The inventor with a courage born of his convictions had not yet arisen. Some of those born out of time, Fontaine, Swinnerton, Raub and the great Holman, carried the germs of improvements to overcome these wastes, in part, but their efforts have been ill-timed, and they have suffered a martyrdom to the causes they have variously essayed, through a public lack of appreciation, and a studied disregard of proven economies of their systems by wobbly kneed officials, to whom the slightest remove from olden-time practices was a capital offence.

There are still those who, in a feeling of antagonism to departures from the worship of methods moss grown, will question some of the many economical innovations here appearing for the first time in locomotive construction. "Haec olim meminisse juvabit."

A brief description of a newly devised and highly economical engine follows herewith, reference being made to numbers as appearing on engraving.

1 is a small head or signal lamp, burning kerosene, and is a substitute or understudy for the high-power electric search-light, should the electric light fail in operation from any derangement of wires, or should bugs, attracted by the light, clog the dynamo or light exciter. Should bugs be attracted in such quantities as to seriously impede the movement of trains, it is suggested as a remedy, the painting of front end of engine with an insecticide, and the spraying of the right of way with a saturated solution of bichloride of mercury and alcohol, carried in a suitable receptacle placed on the tender of engine. The spraying to be accomplished by the use of compressed air.

2 is a high-power triple X-ray electric search-light of 9,340 candle-power, to enable the engineer to see around curves and through mountains. The light exciter or persuader is driven by a small steam turbine or calorifluke 3 controlled from the cab by the lever 5. This light serves a special purpose in such parts of the country as are infested by train robbers, the X-ray feature enabling the engineer to detect the inmost thoughts of those coming within its range, and to govern himself accordingly.

4 is a side hood over reflector of lamp, the office of this hood being to keep the intense glare of the headlight from blinding the depot master.

6 is a new anti-sleep-on-the-track device, being a highly polished nozzle or hydroshove, attached to a pipe leading back to boiler, and operated by lever 15, from fireman's side of the cab. The object of this apparatus is, to project against the cuticles of hoboes or stray beeves upon the track, a stream of aqua pura at a temperature of 212 degrees; this is to assist the aforesaid hoboes and beeves to a realization of their danger, and to be of service in the acquirement of a hump upon themselves in the clearance of the right of way. This squirt can also be used in the winter for the melting of snow banks left by the plow.

7 is an especially designed 19-inch air brake pump, which, together with a new and improved brake rigging, will stop a train of 70 cars at a speed of 42.7 miles per hour, in 8 feet, 10 inches. This will enable an engineer to run at full speed right up to the station platform, thus saving many money-bearing minutes, now lost by the slowing up of trains entering stations or terminals.

8 and 9 are air brake pump steam exhaust and supply pipes, in the order named, the supply being taken from the dry pipe to the front cylinder of the lower tandem-compound portion of the engine. **10** is a new and vastly improved smoke pipe or carbowallop, for the swift conveyance of smoke, cinders and gases back to the fire box for re-incineration, and with a nice new lead pencil and a sheet of smooth brown paper, a saving of at least 75 percent in coal consumption can be easily figured, and in actual service there is no doubt but what a train of 68 cars and a short caboose can be hauled 137.49 miles per half ton of coal.

12 is a by-pass or deflectorbolus, so placed in the carbowallop as to enable the engineer, should there be too much smoke, ashes or cinders returning to fire box, thereby causing too intense a fire, to turn the smoke or gases into the stack 11, and allow them to pass to the atmosphere as shown on engraving.

41, 42, 43, are also parts of the smoke pipe or carbowallop, as aforesaid, 41 being a movable sleeve, or slipguilder, connected with petticoat pipe, 43, and operated by cab lever, 42. The wings of this petticoat pipe act as an atmosphere scoop when engine is running forward, and induce a rapid movement of the oxygen-charged smoke, together with gases and cinders, to the fire box. The forced addition of the oxygencharged smoke makes a fire of such intensity that an engine equipped with the apparatus will burn very nearly anything, and is especially fitted for the burning of a mixture containing equal parts of culm, fine gravel and slag. The use of this composite fuel will effect a still further saving of 20 percent, making a total estimated saving of 95 percent over present fuel consumption per train mile, and tons hauled.

16 is a pipe connected with compressed air reservoir. It is controlled by valve 21 and is to be used as an auxiliary blower for the carbowallop, when engine is making steam in the house.

13 is a signal or fireworks holder placed upon the sides of the carbowallop, so as to insure a prominent display for the usual railroad signals, flags or lamps. This device is also to be used in connection with a newly designed system of weather signals, by flags and pyrotechnics, carried on the engine. This flagholder in connection with the triple X-ray electric search-light, will be found especially valuable in apprising the train dispatchers of the train's location, in the event of a lap order, or when wires are down.

14 is a new steam bellringer or chimodad, a special feature being the connection between the chimodad and the bell, which prevents the bell from turning over. Other inventors have struggled for years in the solution of this problem without success.

17, 18, 19 are steam cylinders forming a trunk cross-steeple-tandem-compound system of such marked economy in steam consumption as to effect a proven saving of 87.8 percent over the steam consumption of the highest type of simple engines of the same draw-bar pull and under similar conditions. Improvements now making will show a still further economy in the steam consumption of 12.2 percent, which will make a steam economy of 100 percent; the steam being actually used up without waste, positively no steam appearing in the stack or carbowallop. The distribution of the steam in these cylinders is very simple, but is too complex for a written description.

22, with padding 24, is a new and improved pilot or flipgang carried on the pony truck wheels 23,



to keep the nose of the flipgang from stabbing into the ties. The conventional pilot is a rude, barbarous construction and a relic of days gone by. A swine upon the right of way, struck by this oldtime pilot, would be tossed aside in a brutal manner, and in some cases seriously injured, to say nothing of the hazard of covering the front end of the engine with disrupted hog. Suits for damages resulting from the promiscuous distribution of swine over the surrounding country are entirely avoided by this new and improved device, and the saving thus accomplished will go a long way in the settlement of the pay-roll and purchases of soft hammers to be used on the sand pipes or cinder hopper.

25 is a brace leading from heel of flipgang back to the center of front bearing pony truck, and serves to keep the wheels in alignment, and prevents a wobbling motion tending to weary the fireman, and possibly leading the engine into the ditch, and resulting in the derangement of portions of the reciprocating parts.

26 is the front frame, carrying saddle 20 and tandem cylinders 18 and 19.

27, 28, 29, 30, 31, 32, 33, 34, refer to compressed-air attachment. 33 is the main compressed-atmosphere retainer or drum, atmosphere entering through the strainer 32. This strainer is for the separation of dust and bacilli from the air before it enters the circulaoxytor or blower. The introduction of the railway bacillus (Bacillus Amylobacter) into the carbowallop being a serious matter, and one hitherto overlooked in locomotive construction. The atmosphere strainer connects directly with the circulaoxytor or fan blower 30, driven by a chain and sprocket wheels from the axle of the front pony truck. The atmosphere is forced by the circulaoxytor through pipe 31 and the coiled conducting pipe 27, and enters retainer at 28, the pressure in the retainer being controlled by a whistle safety valve 30, having a "toot that's like a hoot."

35, **40** are recording gages for determining the effected steam-saving, and are to be consulted on the arrival of train at each stopping place or terminal, and the results noted in a nice little pocket record book, especially designed and provided for the purpose.

36, **37** are steam supply pipes to the cylinders, and are so very simple as to make a description unnecessary.

38 is a small pan or drip to catch water coming from the cylinder cocks and is connected with a small pipe which returns the water to the boiler for reheating.

39 is main steam supply or dry pipe placed above the boiler. The steam produced by this boiler is so very dry, and the percentage of moisture so small, that lagging of the dry pipe to prevent condensation is unnecessary.

44, 45, 46, 47, 48, 50, 63, 64, 65 have to do with the tracksanding system. 47 is the sand holder, sand being introduced through orifice closed by the cover 44. 45, 46 are sand-conducting pipes, 45 being for the conduct of sand to the rail in front of pony truck wheel 31. The forward movement of the wheel over the sand tends to break up the coarser particles and to spread the sand evenly over the rail, so that traction wheels 54, 56 get a firmer hold upon the track. Any kind of sand or fine gravel will serve the purposes required, the grinding action of the various wheels tending to reduce it to the proper fineness. 46 is a sand pipe for delivering sand upon the intermediate driving wheels, and operates to prevent slipping and heating the tires. The sand used through pipe 46, is the sand that is returned to the holder by the compressed air exhaust system. 63 is a small brush or dustoscope, just abaft the traction wheels. The object of this dustoscope is to brush the sand remaining on the rail into the funnel shaped scoop, 64, from which it is exhausted through pipe 65, by an exhaust created by compressed air pipe 50, and is thence carried to the sand holder for use over again.

dividends. **49, 51** shows an amazingly simple valve and reverse motion, constructed boldly along original lines, and is as distinctly a radical remove from the common every day link as was the link from the olden time hook motion. There are those who could not invent a button for a buttery door, who will no doubt stand ready to question such a decided innovation, and in their poor, weak little intellects, will conjure up trials and tribulations for the inventor, as was ever the wont of such small malicious natures.

in the purchase of coal will go a long way toward the earning of

There will be those whose every endeavor will be to bring about contentions as to, we will say, steam consumption of this engine, claiming it to be excessive, or the other way, to the end, that the inventor lay bare the whole scheme of the motion, in order to demonstrate its meritorious features. The inventor would remind such that he is no newly born biped, that his eye teeth have been cut this many a day, that he is somewhat of a conniver himself, and that he intends to keep the salient features of his device sequestrated, against such time as the formation of a company to build this locomotive, and who are willing to "dig up" \$1,267,348.27 in current coin and hand to your humble servant on a silver platter. Nay, kind friends, the explanation of this device we will pass by.

We will, however, venture this much information in relation to the reverse motion portion of this new system.

51 shows a bridge or carry-over, supported at either end by studs or pins. Equidistant on this bridge are round openings suitable for the reception of a movable crank pin.

When the desire to reverse the engine comes to the fireman, the locomotive is brought to a standstill, and a small iron ladder, carried on the tender, is placed on the ground, the top resting on the lower part of flange of the high driver **52**. A dexterous twist of the wrist removes the crank pin from the position it is in, and it is moved along across the bridge to a corresponding hole on the opposite side, thus moving valves and reversing the engine. Talk about simplicity - this is simplicity itself!

52, **53**, **54**, **55**, **56**, **57** pertain to sundry and divers driving and traction wheels, all designed to the one end - that of the highest speed, combined with a great economy and perfect safety. By the use of these traction and driving wheels great tractive power is obtained, the pull on the drawbar representing 213,647 pounds. Theoretically, this engine will easily haul 294 standard freight cars of 60,000 pounds capacity, fully loaded, at a speed of 84 miles an hour.

52, 53, 57 are tripod traction wheels. with "blind" or "bald" tires, mounted in such a manner as to produce a perfect balance of the reciprocating parts, and tends to make the smoothest running engine ever built - so smooth and noiseless, in fact, that, at a speed of 119 miles per hour, this engine will make no more noise in operation than a yellow tom cat crossing a wooden bridge.

58 is rear top frame bolted rigidly to firebox, and supported by coiled equalizing springs 62 on the lower rear frame 67, which is free from the firebox and attached to the running gear.

59, **60** have to do with a new grateshaking device or shudderquake, of very refined adjustment, and worth alone the price of an ordinary locomotive. **60** is an idler wheel hung on a bell crank connecting with the cab by lever **74**. This idler wheel being dropped down upon traction wheel **57**, makes a contact with shudderquake **59**, imparting a rotary motion to the same, moving a connecting rod and suitable rigging, and affording such shakes as may be required for the good of the engine. Drawings and patterns are preparing, whereby the product of this grate-shaking device may be utilized, which will tend to still further increase the savings at the coal pile.

61 is a hollow staybolt, with an opening of 1 inch in diameter. This serves to conduct atmosphere to the fire, and affords an escape for the oxygen-charged smoke returning to firebox through the carbowallop, should the engineer, through negligence or common, daily cussedness, fail to close petticoat pipe 43 and open by-pass 12.

66 is rear supporting wheel, 104 inches in diameter, for carrying the back end of engine and cab.

68 is an ashpan provided with a back damper or clean-out cover connected to cab by lever 69. In an improved device now making, the ashes will be conveyed to the tender, mixed with fresh fuel and burned over. This operation can be repeated until the ashes are worn out.

70, **71**, **72**, **73**, is a new double duplex, wedge, push-down, driver brake. **70** is the brake shoe, composed of alternate strips of basswood, soaked in glue, and cast steel, and bearing upon an inner recessed portion of the back supporting wheel. **71** is a Damascus bronze wedge, attached to lower end of cylinder piston, and operates to force the brake shoes against wheel as shown, the brake shoes falling away from the wheel by gravity, when piston returns to cylinder **72**.

This brake can be applied in less than 1-130 of a second, and is the improved brake referred to before, as being capable of bringing to a full stop in a distance of 8 feet, 10 inches, a train of 70 cars, at a speed of 42.7 miles per hour.

These quick stops open a new era in dividend getting, and are worthy of the most solemn consideration.

75 is just a common every week-day wind sheet.

76 is a spring hanger.

77 is a polished steel hand hold charged with electricity by the calorifluke, so that in the event of the fireman's slipping when climbing into the cab, the act of slipping will turn on the electric current in the hand hold, preventing the fireman from falling, because of his inability to let go of the hold.

This is but a slight tribute to the high courage of the men who would dare to manage this engine, and at another time we may discuss some of the many pleasant features of this engine devised to make life more agreeable and worth the living to those up ahead.

78 is the water supply pipe to the injector.

79 is an electric cab step, especially designed for enginemen with large feet, and who wear heavy shoes. By standing upon the step and touching a small button, the engineman is swiftly shot into the cab without exertion on his part.

80 is bearing brace for brake shoe.

81, **85** pertain to the new and highly improved "Whale" injector, which automatically forces 96,378 pounds of water into the boiler hourly, delivering the cold water directly upon the crown sheet, which tends to keep the crown sheet cool and free from crimps.

82 is the nose of the running board.

83 shows gage or try cocks designed for left-handed firemen, and placed outside of the cab to prevent the dripping of water into the fireman's dinner pail.

84 is steam supply pipe to "Whale" injector.

86, 87, 91, 92 are portions of the cinder hopper or frugoeconomiter, and is a device for separating the coal and cinders coming through the carbowallop and delivering them on a shelf at the back end of fire box, where the fireman with a pair of asbestos mittens removes large rocks, bits of wire and scrap tin before returning the coal or cinders to the fire box. Should the frugoeconomiter become choked by material too large to pass

through to the fire box, the fireman can remove the covers, **87**, **91**, and hit the congested mass a t'ump with an eight-pound hammer provided for the purpose, thus starting the stuff in the direction intended by the inventor. This device exerts a coal saving of 25 percent, which, combined with the saving effected by the carbowallop, makes a coal economy of 120 percent. The improvements now making will result in these engines becoming coal producers instead of coal consumers, and doubtless the railroads adopting this locomotive will have coal for sale, or to give away.

88 is the steam dome, to which is attached the steam pressure gage, 89. One of the duties of the fireman is to arrive out on the running board every six or eight minutes, and keep "tabs" on the steam pressure, as exhibited on the gage - the object in placing the gage on the dome being to keep the fireman from sleeping and neglecting to remove the debris coming through the frugoeconomiter.

90 is the steam turret and throttle lever casing.

93 shows a brace for holding the steam hood of the car heating pipe.

94 is a brace from the steam dome to the frugoeconomiter, and acts to resist the impact of stones, coal and cinders coming through the frugoeconomiter.

95 is a double and triple silver-plated steam chime whistle of such power as to be heard, on a still day, at a distance of forty-three miles, giving the gatemen at crossings ample time to lower the gates and to warn passersby to stand at least 37 feet 6 inches away from the track when these fast trains pass.

96, 97 are portions of a new car-heating device. The steam escaping from the silver chime whistle is caught by the steam hood 96, and is carried back through pipe 97, which passes through the boiler to super-heat the steam, and thence to the car-heating system. This effects a saving of 100 percent in car-heating, the train being heated by steam that is usually lost or wasted at the whistle.

98 is a cab roof ventilator, which serves to clear the cab from smoke escaping through the hollow staybolts, due to overcharging the firebox by smoke returning through the carbowallop. Each locomotive is also supplied with a wet sponge, which the engineer can tie over his face to prevent suffocation, should the ventilator fail to clear the cab quickly enough.

99 is a signal lamp, similar in character to the one on the front of the engine.

100 is a cab bay-window, so arranged as to afford a clear view of the track ahead. This does away with the hole-inthe-elbow-wearing practice of leaning out of the cab window, prevents the cold air from blowing the engineer's eye out, or the dropping of equally cold rain water down the back of his neck.

101, **102** are parts of a very finely adjusted, quick-acting throttle, which is non-stickable.

103 is an electric nameplate, so arranged as to flash any number up to and including .99999, if for any good and sufficient reason these numbers can be used for any purpose whatever.

The foregoing explains, in a brief way, some of the many economical features of this new wonder in mechanics.

The inventor stands ready to demonstrate the economics of this engine, on any kind of paper, either with pen and ink or with a soft lead pencil with a rubber tip.

The writer has (in his mind) a great works for the building of these engines, and shops in which new methods for the economical handling of work obtains, and at some distant day may acquaint you with some money-saving devices which, to say the least, are startling.

The Centennial of Place Viger Station and Hotel

By Fred F. Angus



The Place Viger Hotel photographed in the summer of 1898, about the time it first opened. Photo from "Art Work on Montreal" published by William H. Carre, 1898.

On August 13, 1898, the Canadian Pacific Railway opened its new station and hotel in the eastern portion of downtown Montreal. The site was not new to the CPR, for it had built the old Dalhousie Square station (sometimes called the Quebec Gate station) in 1882 when it moved its Montreal terminus west from the old Hochelaga station of the QMO&O. For six years Dalhousie Square was CP's main Montreal station, and it was from here that the first transcontinental train departed on June 28, 1886. However CP wanted a more central terminal and on February 4, 1889 Windsor station on Dominion Square opened. However many trains, those to the north and to Quebec City in particular, continued to use Dalhousie Square.

As the century neared its end the CPR planned a larger, more modern station in the same area as Dalhousie Square. It also wanted a hotel in Montreal and, as there were already many hotels near Windsor station, decided that the new Place Viger site was the place to build it. Accordingly work began, and the project was completed in the summer of 1898. The old Dalhousie Square building was not torn down, in fact, greatly altered, it still stands.

The Railway and Shipping World, in its issue for August, 1898, had the following to say about the new project:

Place Viger Station.

This station & terminal hotel in the east end of Montreal was opened Aug. 13. The building was erected in consequence of an agreement entered into between the Company & the City Council. Rather than return to the C.P.R. some property that has long been used as a park, the City offered to buy a site for a new building & exchange it with the Company for the park. The offer was accepted & the City purchased the site upon which the building now stands. The Company faithfully carried out its part of the agreement by erecting one of the handsomest buildings in Montreal at the cost of \$350,000, & producing at the same time the finest & most modern hotel in Canada. It has been funished with a regard only to good taste & not expense, & is a credit to the city. The station occupies a whole block & is situated on Craig St., facing the Viger gardens; it is bounded on the west by Berri, south by Notre Dame & east by Lacroix St. The Craig St. frontage is 300 ft., & the depth, measured along one of the wings, is 116 ft.; the depth of the main portion of the building is 50 ft. The tower rises 138 ft. above the curb, the whole structure forming a grand aggregate of 1,750,000 cubic feet.

The building is arranged after the idea so prevalent in England, with the hotel above the station proper, making it at once a

MONTREAL TO QUEBEO									
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-0	Montreal, Pl. Viger.6., Ly	+ 8.40 am	* 8.80 pm	+ 6.00 pm	11.00 pm				
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76	Mile Ind	8.58 am	8.48 nm	5 15 pm	11 90 pm				
10	Sault Recollets	1 9.08 **	1 8.58	5.87	11.80				
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- 11	St. Martin.			1 5.82 **					
12	St. Martin June.	9.17 "	4.06	5.85 "	11.40 "				
17	St. Vincent de Paul	1 9.25	4.15 "	5.50	/11.54 pm				
30	Terrebonne	9.33 -	1.28	8.12	12.06 am				
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48	La Valtrie		6 05 **	8 58 4	119 54 am				
48	Joliette Jung	k	5.15 pm	7.10 pm					
56	JolletteAr	10.45 am		7.95 pm					
61	St. Emelie	11.25		7.40					
86	St. Felix	11.45 am		7.50 **					
71	St. Cleophas	12.05 pm		8.02 **					
77	St. Gebriel	+12.30 pm		† 8.15 pm					
48	Lanoraie	10.15 am	5.17 pm		1.08 a.m				
57	Berthier June	10.30 am	* 5.35 pm		1.28 a.m				
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	(1.0	10.15 am	+ 5.20 pm	<u></u>	· · · · · · · · · · · · · · · · · · ·				
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87	Pointe du Lac		6.89 **.		2.40 **				
96	Three Piverel 5 Ar	11.35 "	6.55 **		8.00 **				
	THEO KINGISTHIN STA	11.45 "	7.10 "		8.15 **				
107	Plies Branch Juno,	11.51 a.m	7.16 "		3.23				
101	Retisoen	10.00	7.86		1 3.47				
- 113	Ste Anne de la Parada	12.20 pm	7.60	••••	1 4.00				
127	Grondines	10.40	8 15 4	•••••	4 4 24 4				
129	Lachevrotiere	f12 48	8 01 **		1 4 12 "				
123	Deschambault		8.28 **		1 4.50 "				
137	Fortneuf.	1.02 "	6.87		5.00 **				
142	St. Basile		8.47		1 5.12 "				
146	Pont Bouge	1.18 "	8.57		5.25 "				
159	Belair	1.40 "	9.21 "		1 5.55 "				
100	Lorette	1.55 "	9.88 **		1 6.10 "				
172	Vuebec 1Ar	it 2.15 pm	* 9.50 pm		* 6.20 am				

haven of rest & comfort for the travelling public. The architecture is of the French Renaissance, partaking of the type of the old chateau found on the banks of the Loire. The general outline & effect of the building is one of great solidity combined with gracefulness, & with its numerous towers, turrets & quaint gables it forms altogether a most pleasing sky line. The situation, in fact, is of the very best, as it commands a splendid view of the Gardens & that portion of the city. The C.P.R. evidently does not agree with those people who think that the west end is the only place for a first-class hotel. The Company has faith in the east & has built an hotel whose magnificence would command liberal patronage wherever the building was situated.

The lower portion of the building is of Montreal gray limestone & the upper portion of Scotch buff fire brick with stone trimmings, all in complete harmony, & emphasizing the beauties of the noble & graceful style. The Craig Street facade is composed of the grand portico, with 21 elliptical arches, the portico being 228 ft. long by 16 ft. wide. It is crowned on the top by a beautiful balustrade, behind which can be seen the spacious balcony. The tower raising from a graceful sweep into a great circle, is the central point of interest & with its numerous turrets & gables makes a telling picture. The arcade is lighted from the balcony with prismatic lights. This arcade is one of the most pleasing features of the building. It runs along the front of the hotel & has 21 arches. Broad granolithic steps lead up to it from the sidewalk. The arcade will be a delightful place for the guests to sit out the pleasant hours of a summer evening, &, facing the Gardens, will command a pretty view. The 2nd storey comes out over the arcade.

The building is 5 storeys high. The slate roofs are very steep, being at an angle of 50 degrees, studded by copper & stone dormers & airy turrets, the whole mass making an unexcelled sky line. In the centre of the arcade large doors afford admittance to the general waiting room, which is circular in form and is in the centre of the whole building. It is 55 ft. in diameter. To the left, arranged along either side of a main corridor, are the offices of the executive officers, smoking rooms, ladies' waiting rooms & lavatories, while farther along is the baggage room, & to the rear of the baggage room, occupying a whole wing of the building, is the ex-

MONTREAL AND LABELLE-Laurentian Mountains									
36	49	47	81	M	STATIONS	34	40	80	62
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		8.18	11.19	64	Ste, Agathe		7.00	8.90	
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These two timetables, dated March 13 1899, are among the earliest to show Place Viger. Note that some trains to Quebec and the Laurentians used Windsor station instead of Place Viger.

press room. To the right of the main waiting room is the hotel department. All the upper floors are devoted to hotel purposes on plans arranged to the most modern & up-to-date ideas.

Passing out through the main waiting room the car tracks are found. The passenger platforms are covered over with roofs which run up to the rear of the building, thus putting the passengers to no inconvenience or discomfort during unfavourable weather. The station is one of the most completely equipped of its kind on the continent.

In the hotel portion, west of the central tower, are the reception rooms and offices just off the corridor, & off the same corridor are the smoking rooms, cafe, bar, billiard room & barber shop, parcel & cloak rooms. From the centre of the rotunda a grand marble staircase leads to the 1st floor, which is of Mosaic, with a Greek fret border round each room & the corridor. The building is wainscotted & trimmed with oak throughout. On the second floor are the dining rooms, breakfast room, writing rooms parlors, etc., all finished in oak, besides the extensive corridor, 10 ft. wide, running the whole length of the building. Throughout the rest of the building are found ample sized parlors & bedrooms, making a total number of 150 bedrooms. These bedrooms are arrange to rent en suite or single, as required by guests. In this hotel will be found all the accommodations necessary, everything being modern & up-to-date, electric light wiring, wired throughout in iron-armored conduit, steam heating, elevators, has net beer, & bells, & a kitchen service unsurpassed.

Place Viger station and hotel served CP well into the twentieth century. However it was soon found that the decision to locate the hotel in the eastern portion of the city was a mistake; it was too far from the centre of the city, and this was many years before Old Montreal became a tourist attraction. During the Depression of the 1930s, the hotel closed, and was later bought by the City of Montreal as a City Hall annex. Not until 1965, with the construction of the Chateau Champlain, would CP again have a hotel in Montreal. The station continued in passenger service through both world wars and well beyond. Finally, in 1951, the last passenger train departed from Place Viger and all service was transferred to Windsor.

The Place Viger hotel still stands and is still in use as city offices. Its exterior looks just as impressive as it did when it opened in 1898. We sincerely hope that this great chateau-style building, now a century old, will stand for many years to come.

Still More on the Montreal and Lachine!



Our recent articles on the Montreal and Lachine Railroad have been very favourably received by the members and have attracted much comment. Recently this historic item turned up which is just too good to omit. It was evidently a poster, printed in November 1845, announcing that it was intended to apply for incorporation of the Montreal and Lachine Railway. Notice the emphasis on the word railway. This was the latest technology, and 1845 was the year of the "Railway Mania" in England, news of which had undoubtedly reached Canada. The poster from which this illustration is made is a photostat, most likely made from an original at the time of the M&L centennial in 1947.

An interesting observation is that the intended name, as shown on the poster, was the Montreal and Lachine Railway Company, wheras the name, as actually incorporated, was Montreal and Lachine Railroad Company.

If any members have any further material on the M&L send it in and we will print it. There seems to be a lot of interest in this pioneer line, and we are always ready to oblige.

Fees for the Use of the CRHA Archives



Can-Car photo C-3038, lot 799 Canadian National Railways parlor-buffet cars, May, 1929.

As previously promised, below are the fees for the use of the CRHA Archives, located in the Hays building at the Canadian Railway Museum in Delson / St. Constant.

Please note that the author of the article "What's Cooking in the Archives", in the January - February 1998 issue (No. 462) was Mrs. Josée Vallerand, and not Jean-Paul Viaud as stated in the article.

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Electric Locomotive 6710 Plinthed at Deux Montagnes





ABOVE: 6710 heads a five-car commuter train at Val Royal on April 10, 1995, less than two months before it was retired. The second unit in the train is 6711 which is now at the Canadian Railway Museum.

LEFT AND BELOW: Two views of 6710 in its new location at Deux Montagnes on July 21, 1998, only two days after it was placed there. Already new sod and landscaping has been placed adjacent to the section of track on which 6710 rests, making a very attractive display. Hopefully the peeling paint will soon be re-done!

All photos by Fred Angus

When the commuter line between Montreal and Deux Montagnes was modernized, the old equipment was retired on June 2, 1995. At that time five of the six original Canadian Northern electric locomotives of 1914 were set aside for preservation. Number 6711 (the one that pulled the first regular train through the tunnel) went to the Canadian Railway Museum within a few days. At the same time 6711's running mate, 6710, the first of the series, was designated for display at Deux Montagnes.

On July 19, 1998, No. 6710 was moved from storage and "plinthed" (i.e. placed on permanent display) outside the new commuter station at Deux Montagnes, about a mile beyond the old terminus. It is very fitting that this locomotive be displayed there; close to the railway line that it served so well for more than 75 years. We hope it will soon get a new paint job (which it sorely needs), and that it will be kept in good condition for many years to come.



Book Reviews

Reviewed by Fred F. Angus

CANADIAN RAIL PASSENGER REVIEW, NUMBER 1



By Douglas N.W. Smith Published by Trackside Canada P.O. Box 1369, Station "B" Ottawa, Ontario, K1P 5R4

Price \$25.45 postpaid

This 100 page profusely illustrated (132 illustrations, photos and diagrams, including 44 in colour) publication is actually, despite its name, the fourth in the serious of books on Canadian passenger train service. The three previous volumes were known as "Canadian Rail Passenger Yearbook" and bore the dates 1993, 1995 and 1996-97. Since they do not necessarily appear on an annual basis, the term "yearbook" has been replaced by "review", and the numbering re-started at 1. An innovation this year is the square back binding, making it appear more like a book, rather than a magazine.

Regardless of its name, the present volume continues the high standard set by its three predecessors. First is the introduction, then follows the two years (1996 and 1997) in review, together with suitable illustrations. Then there are the feature articles, including: Commuter Rail trials in Alberta, the American Orient Express, the B.C. Rail dinner train, the Flexliner, the Maynooth "Community Mixed", the West Coast Express, the newly-rebuilt VIA HEP cars, thirty years of GO Transit, and, the longest article of all, a 44-page history of railway stations in London, Ontario. The latter article is worth the price of the entire book, as it discusses no less than fifteen stations, from more than half a dozen railways, that have existed in the Forest City from 1853 to the present. Most of these stations are illustrated, some with extremely rare views. Following the London article, "The Departing Image", and an impressive back cover end the book.

Whether or not you have the previous three volumes, the new Review is highly recommended to anyone who is interested in Canadian passenger train service.

TRAMWAY TO THE POINTE:

The Winnipeg Hydro Tramway, 1907 to 1996

By Peter J. Lacey Published by Peter J. Lacey P.O. Box 233, St. Vital Station Winnipeg, Manitoba, R2M 4A5

This 112-page hard-cover book tells the story of a littleknown railway, the Winnipeg Hydro tramway. It should not be confused with the Greater Winnipeg Water District Railway, which was the subject of a previous book by the same author. As Mr. Lacey says in his introduction: "The Tramway was started in 1907 and is still running today. Not very many cities have two "private" railways, still less operating ones, but Winnipeg does. Both the railways were constructed for the most utilitarian reasons, but nearly a century later remain as fascinating stories in their own rights and as bridges from the past to the present".

The book begins with the history of the Winnipeg hydro power scheme and the reason for the railway. It then follows the development of the railway from 1907 to the present, including the now-closed line to Lac DuBonnet. Also described are the many strange pieces of rolling stock that have been used over the years, including a detailed history of one amazing survival. This is locomotive No. 3, which began life in Glasgow Scotland in 1882 as CPR No. 22, one of CP's first new locomotives. In 1917 and 1918 this locomotive was leased to Winnipeg Hydro, and then sold to them later in 1918. Still owned by the City of Winnipeg, this 116 year old veteran is better known as the "Prairie Dog Central", which hauled trains of happy tourists (and locals) for many years and, hopefully will do so again in the future.

For anyone with an interest in Canada's smaller railways, or an interest in strange rolling stock, this book will be a welcome acquisition.

THE SCHOOL CAR: Bringing the three Rs to Newfoundland's Remote Railway Settlements, 1936 to 1942

By Randy P. Noseworthy Published by R.P.N. Publishing P.O. Box 23, Main Street Whitbourne, Newfoundland, A0B 3K0

While the school cars of northern Ontario are fairly well known, the school-on-wheels that once brought education to the remote settlements of Newfoundland is much less familiar to rail enthusiasts. This is partly due to the remoteness of the area, and also to the fact that in the time under consideration (1936-1942) Newfoundland had not yet joined Canada but was still a British colony. Mr. Noseworthy's 202-page book, with 131 illustrations, is more than a history of the school car; it has much general history of the Newfoundland Railway, and captures some of the spirit of that unique railway system.

In 1936 the Newfoundland government decided to emulate Ontario's successful school car program and placed a school car in servive. The car used was the "Shawnawdithit", formerly the private car of Lord Northcliffe of the Anglo Newfoundland Development Company. It had been built in 1909 by the Silliker Car Co. of Halifax, N.S., but had not been much used in the years just prior to 1936. The school car idea was successful and worked for six years but during World War II it "fell on hard times" and was discontinued about 1942. The old car then went into regular passenger service, and was finally retired in 1951. In 1952 it was cut in two, one half was dismantled for its lumber and the other half became a cabin. Abandoned for many years, this last remnant of the old "Shawnawdithit" is shown in some photos taken in 1994 in the very last stages of decay.

Besides the details of the history of the school car, this book also has stories by persons who taught, and were taught, in the car. There are also anecdotes about the car and the Newfoundland railway in general. Those who like books on this fascinating, and alas now vanished, railway will like this one.

The Business Car

1,000-YEAR BONDS GIVE CPA HEADACHE

Lee Theodoros, Bloomberg News

New York - Toronto, Grey and Bruce Railway Co., a defunct Canadian rail line, convinced bond investors in 1883 that it was a safe bet when it borrowed 719,000 British pounds for 1,000 years. One hundred and fifteen years later, the Southern Ontario company is run by Canadian Pacific Railway Co., which finds its \$1.18 million worth of 4 per-cent bonds due in 2883 to be an administrative headache. Canadian Pacific is trying to convince holders to exchange each bond for Canadian Pacific stock or the security's face value of 100 pounds, or about \$248 Canadian. "They've cost us a small fortune to keep alive," said John Robson, assistant treasurer at Calgary-based Canadian Pacific Ltd., the railroad's parent. Canadian Pacific still prints annual reports for TG&B investors and pays interest on the bonds.

Railroads were among the biggest borrowers in the 1800s as they expanded across North America, financing growth with bonds due in 100, 500, or even 1,000 years. Today, "long term" usually means 30 years. Exceptions include Walt Disney Co. and Coca-Cola Co., which sold 100-year bonds, and Safra Republic Holdings SA, which in October issued bonds due in 1,000 years.

Canadian Pacific wants to retire the debt, issued to finance a 999-year lease, as well as shares and debentures of Ontario & Quebec Railway Co., another defunct line with investors who require financial updates, dividend payments and annual shareholder meetings. "We used to joke around here that we might have to hold the next shareholders' meeting in a cemetery," said Robson.

The TG&B bonds don't trade. Most are held by heirs of the original buyers from Scotland to Australia, or by collectors, Robson said. Printed in black and green with a raised red seal, the bonds are engraved with pictures of a smoke-belching steam engine pulling into a station, and a paddleboat. Collectors sell them for about \$250, said William Hardison, a retiree in Florida who collects old bond and stock certificates. The price could rise to as much as \$350 as the TG&B bonds become scarcer, he said. Canadian Pacific is offering to return the bonds to investors - once they're canceled, Robson said.

Source: Montreal Gazette, July 23, 1998.

REASSIGNMENT OF CPR OFFICIAL CARS

The official car *Champlain*, used for many years by Vice-President Shaughnessy, has been sent to Winnipeg for the use of Manager Whyte, of the Western Lines, whose car no. 15, which as no. 10 was the General Manager's car when Sir Wm. Van Home first occupied the position, has been sent to Vancouver for General Superintendent Marpole, of the Pacific Division. Mr. Shaughnessy will in future use the *Metapedia*, which was built for Lord Mountstephen (sic) when he was President. Sir Wm. Van Horne sticks to the *Saskatchewan*, of which so many railway men & others have pleasant recollections.

Source: Railway and Shipping World, September, 1898.

CNASKS U.S. REGULATORS TO APPROVE RAIL LINKUP

Washington - Canadian National Railway Co. asked U.S. regulators to approve its \$3-billion acquisition of Illinois Central Corp., a linkup that will create an 18,760-mile carrier with 26,000 employees operating in 16 U.S. states and eight Canadian provinces. Canadian National filed its acquisition plan with the U.S. Surface Transportation Board on Wednesday [July 15, 1998]. The two railroads reached an agreement in February, which will ex-

tend the Canadian carrier's reach to the U.S. Gulf Coast. Canadian National president and chief executive Paul M. Tellier, in an interview, said he asked the board for speedy approval of "a merger that makes a lot of sense." Tellier said the merger "is very much pro-competitive", and that no shipper that currently is served by two railroads will lose its access to competing carriers.

Many shippers have complained to the rail board that the last two mergers - the Southern Pacific into Union Pacific Corp. and Conrail into the CSX Corp. and Norfolk Southern Corp. resulted in many of them losing their access to competing railroads. Rather, Tellier, said the merger will combine the strong Canadian National and its money-losing U.S. subsidiary, the Grand Trunk Western, with the Illinois Central, a regional carrier that runs between Chicago and New Orleans. He said Illinois Central "was threatened by the consolidation wave" that has reduced the U.S. rail map into four major systems: Union Pacific, CSX, Norfolk Southern and the Burlington Northern Santa Fe Corp.

Within three years of the merger, he said, the deal will add \$350 million a year to Canadian National's gross revenue, making Canadian National "the biggest of the small guys." Last year, Canadian National had revenue of about \$3 billion, while Illinois Central's revenue was about \$700 million. The merger is in line with his company's belief that the major future growth in the rail industry will be in north-south movements, between Canada and the U.S. and the U.S. and Mexico. If the board agrees, Canadian National's route map will look like a Y, from Halifax to Vancouver to New Orleans on the U.S. Gulf coast.

Source: Montreal Gazette, July 17, 1998.

AN UNUSUAL RULE FOR A MEET

It is not generally known, says the "Texas Railway News," that the famous North & South Railroad formerly had no telegraph wire. It runs a short distance in Southern Texas and has two trains. Recently these trains met mid-way. There was a great quarrel as to which train should back up to the end of the line. Finally the conductors agreed that the train having the less number of passengers should back up. The passengers were counted. One had nine, the other ten, and the train with the nine passengers backed to its starting point.

Source: Locomotive Engineering, December, 1897.

CN SELLS SHERBROOKE SUBDIVISION

On July 23, 1998, Canadian National Railway Co. reached a deal to sell its 157-kilometre rail line in the Eastern Townships to Emons Transportation Group, a U.S. short-line rail operator. The CN line, known as the Sherbrooke subdivision, runs between Ste. Rosalie and the U.S. border. The line carries about 22,000 carloads of freight and 12,000 intermodal containers a year, mainly for shippers in the chemical and pulp-and-paper industries. No purchase price was disclosed. "Selling the Sherbrooke subdivision to Emons is an ideal way for CN to preserve and improve rail service for shippers in the Eastern Townships area," Francois Hebert, CN's assistant vice president (network restructuring) said. "The new short line will also strengthen CN's key rail link to New England for its carload and intermodal business".

The Sherbrooke Sub was once the Canadian part of the Montreal - Portland line of the Grand Trunk, and was originally called the St. Lawrence & Atlantic. The U.S. portion (neé Atlantic & St. Lawrence) was sold some years ago and is now the St. Lawrence & Atlantic (no relation to the original St. L & A.).

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PUTTING THE FUN BACK IN FUNICULAR



The famous funicular railway in Quebec Ctiy, running between Lower Town and Upper Town, was closed following a serious accident in which the cable broke and a car plunged to the bottom, killing one passenger. This funicular has since been completely rebuilt, including the latest safety devices, and little or nothing remains from the old one.

On April 30, 1998, the rebuilt funicular reopened to the public and has been in service ever since. Our member Mark Paul was in Quebec City on that occasion, and sends this photo, taken by Rhoda Riemer on the innaugural day.

RELICS OF ANOTHER FUNICULAR



For more than eighty years, a funicular railway operated from the beach at Port Stanley, Ontario, to the bluffs above. In the days of the London & Port Stanley electric line, thousands of people rode the L&PS to Port Stanley for a day at the beach. One of the attractions there was a ride on the funicular to the top of the bluff, where one could climb an observation tower and look out far over Lake Erie. Although passenger service on the L&PS ceased in 1957, the funicular continued for another decade; your editor recalls riding it in 1964. Eventually it was closed down when the provincial government decided that it was an elevator and did not meet the standards for operation of elevators.

On July 15, 1998, your editor returned to Port Stanley for the first time in 34 years. Little remained of the funicular except some obvious traces of the upper station. However, in the parking lot of a supermarket were the two cars, still in excellent condition, as you can see from the above photo taken on that day.

EARLY MORNING KITCHENER TRAIN INAUGURATED



A big sign, complete with redundant apostrophe, at Kitchener station, advertising the new train. Photo by Fred Angus

Via Rail's new early-morning service pulled out of the Kitchener train station Monday [June 15, 1998] with a few passengers hoping it was the beginning of the end. The end of the white-knuckle drive to Toronto, that is. "I can just relax and read the newspaper", said Kitchener commuter Wendy Fisher. "If you're driving to Mississauga, then taking the GO train, you're constantly on the move. There is no time to relax". About 50 people boarded the three-car Via train in Kitchener, clutching free coffee and a Timbit or two as the railway inaugurated a schedule change aimed at attracting the occasional or frequent commuter. It's not an added train: Via has moved its mid-morning service, which arrived in Kitchener just after 9 a.m. to a 7:18 a.m. departure. The train now gets into Toronto at 8:50 a.m. The west-bound afternoon service out of Toronto remains unchanged, leaving at 5:30 p.m. A oneway ticket costs \$20, plus tax, but there are savings for booking at least five days in advance. Via also has a 10-round-trip-ticket deal for \$180, plus tax, which cuts the cost of a trip in half. This summer, children 12 years old and under travel free within the Via system when they are accompanied by a fare-paying adult. While 50 is not a remarkable number of passengers for the station to handle at any one time, the group which climbed on board Monday included more briefcase-toting commuters among the usual luggage-lugging travellers.

Kitchener has seen passenger-rail service through the city fall from five daily trains each way in the mid-1980s to two trains each way today. Starting in the fall of 1996, Via ran a six-monthlong experiment with an early-morning service using a Danishbuilt Flexliner train. Impressed by the passenger interest but disappointed with the machinery, Via dropped the service. After a year of lobbying by politicians and train advocates, Via announced the schedule change last month.

Source: Kitchener-Waterloo Record, June 16, 1998.

MONTREAL & OTTAWA RAILWAY (CPR)

This line having been completed, will be open for passenger traffic Aug. 28 [1898], by 3 hours' service between the two cities, two trains a day each way.

Source: Railway & Shipping World, August, 1898.

MONTFORT COLONIZATION RAILWAY

The gauge of this line, from Montfort Junction to Arundel Quebec, has been changed from 3 feet to standard, 56 lb. rails being used.

Source: Railway & Shipping World, August, 1898.

FAREWELL TO VIA CONDUCTORS



An era in Canadian passenger train history came to an end at midnight on June 30, when VIA Rail abolished the job of passenger conductor. This move was not unexpected, in fact it had been postponed more than once, but it does mark the end of a tradition going back to 1836.

In the earliest days of railways it had been decided that the conductor, rather than the engineer, would be in charge of the train. This was largely due to the difficulty in those days of communicating with the engineer on a moving train. Today times have changed, and passenger trains are becoming more like ships and airplanes, where the captain, or pilot, is in charge of train operation while the passenger representative is in charge of matters dealing with passengers (e.g. collecting tickets and dealing with complaints etc.).

Your editor was in Sackville N.B. on June 30, the last day, and saw the last "Ocean" to have conductors. On that day The Moncton Times & Transcript had a good article on the subject from which the following is taken:

"Via Rail conductors won't be celebrating Canada Day tomorrow. About 250 Via conductors across Canada are losing their jobs on the nation's birthday, as the company replaces them with technology. Thirteen conductors in Moncton are affected by the job cuts..... The conductors, most of whom are men aged 40-50, can chose early retirement, severance packages, or rejoining Canadian National (CN), where they still have conductors on their freight trains.... [However, in most cases, CN will not be taking them back. Ed.].. "They are victims of technology", said Bradford Wood, general chairman of the Brotherhood of Locomotive Engineers, which represents the conductors. "The engineers have moved with the technology, but the conductor has more or less been consumed by the technology. The conductors were the gods of the trains in the 1940s. When they went to diesel electric in 1956, the technology started to overcome their craft". The union has also negotiated with Via to enable about 100 conductors to become locomotive engineers, Wood said, since CN may also be looking at removing conductors in the future.....

Via made the decision to cut conductors from their trains over a year ago, with the finishing details finalized this week. The decision came after the company surveyed its operation to trim the fat of duplicated services. That search led them to the role and responsibility of the conductor, he said. Once needed to give trains the OK to move and to seat passengers and take tickets, the duties of the conductor have been spread out to other employees or made unnecessary through technological improvements. Locomotive engineers and on-train service personnel will now take care of these services.....

John Pearce, president of Transport 2000 Atlantic, a Halifax-based consumer interest group for travellers, said the cuts are better for consumers than cutting trains. "I don't want to play down the fact that this is a job loss", he said. "The key is that it is the lesser of two evils. You either cut back on staff or you cut back on train service. Via's in a real bind and anything they can do to continue their service is good".

While there is some nostalgia for the "good old days", perhaps the day of the conductor had indeed passed. Unfortunately one of the last incidents reported concerning a conductor occurred on June 25, less than a week before the end. It was a case of surlyness to a passenger on one of the corridor trains, and it made the national newspapers. Although such cases were in the great minority, even one is too many. It remains to be seen how the duties of the conductors will be handled by the on-board personnel. We hope that the looked-for benefits will be realized, and that VIA passenger service will maintain its high reputation.

FIRST HOUSES SPROUT AT ANGUS SHOPS

Jan Ravensbergen, The Gazette

Call it recycling - writ extra-large. After several years of delay and planning, the first group of 50 houses are in varying stages of completion on the biggest land-redevelopment site on the Island of Montreal, 5.4 million square feet in the Rosemont-Petite-Patrie neighbourhood. The turf once served as the bustling Angus maintenance-and-locomotive-building shops for Canadian Pacific Railway, and was long the district's economic engine.

In the past few weeks, Angus has become a construction site. About 28 miles of rail track once installed on the site have been pulled out. Developers insist the soil is being thoroughly decontaminated of heavy metals and oil, with decontamination of the first residential phase to be completed in the next 10 days. Plans call for construction of about 1,200 housing units over the next eight years, to provide relatively low-density housing for about 5,000 people, in addition to an industrial park and retail and commercial space. The ambitious project is designed to keep families on the city of Montreal's tax rolls - to encourage them to stay in the city rather than choose the suburbs, said Jacques Coté, president and chief executive of Canadian Pacific Ltd. subsidiary St. Lawrence and Hudson Railway. Coté made the comment to reporters during a tour of the site. One deal landed thus far is a Maxi & Cie. store, which is to occupy a big chunk of the 450,000square-foot locomotive shop, said CPR real-estate executive Marc



Lapierre. That \$12-million project, bankrolled by Provigo Inc., is expected to open next spring. Talks are under way to incorporate historic and railway-related items inside the Maxi store, paying tribute within the sprawling, renovated red-brick structure to the industrial history the site represents.

The Angus site was once largely swampland, but was initially developed in 1904. Steam locomotives were built there until the diesel-locomotive age arrived in the 1940s. Over the long term, that turn of technology's wheel spelled decline and, ultimately, doom for the shops, as well as unemployment for its workers. At its production peak during World War II, the Angus Shops had a work force exceeding 12,000. They built 1,420 Valentine tanks, of which 1,390 were shipped to the Soviet Union to fight the Nazis. When the shops closed in 1992, the work force was down to 900 people.

Source: Montreal Gazette, June 11, 1998.

MONTREAL NORTH SHORE COMMUTER SERVICE TO ROLL THROUGH YEAR 2000

Heather Sokoloff, The Gazette

North Shore commuters are now assured their beloved train will keep running through the year 2000. "We had to get 1,500 people to take the train every day so we could keep it, and we had no problem getting that", said Nicole Houle, managing director of the public-transit agency for the lower Laurentians. The Montreal-Blainville train is attracting about 3,000 users every day, according to Rosemere Mayor Yuval Deschénes - and he would like to see this figure increase to 5,000 within two years. The route began last spring as an experiment to prevent more traffic congestion when a bridge linking the North Shore to Laval closed for repairs.

Yesterday's [May 25, 1998] announcement from the Metropolitan Transport Agency that service will be renewed for another two years means the train has matured from a temporary to a permanent solution - and the preferred transportation option for many commuters. The number of trains has been increased to six from three in the morning, and to eight in the evening. And starting July 1, train users will be able to use their tickets to ride the Metros and buses on Montreal Island.

Deschénes likes the step-by-step approach to getting the train rolling. "We had a chance to get our people used to it before it caused us any financial implications". In addition to the user fares that covered 44 per cent of the cost of the train, the MTA and the Quebec Transport Department covered the rest. "In January, 10 of the North Shore municipalities got together and decided to make an annual contribution of \$500,000 - making the train a partnership between the users, the MTA, and the municipalities served by the train", Deschénes said. He said the train increases the property value of Rosemere homes. "It costs about \$10,000 a year to operate a car, and the train prevents families from having to buy a second car. "This means more people will stay in Rosemere, instead of moving into the city. It also means there will be less people on the roads", Deschenes said.

Traffic congestion is a major problem, as road and bridge capacity has not kept up with the number of vehicles on the road. The MTA says there were 1.03 million vehicles in the Montreal area 15 years ago. Now, there are 1.5 million. "We dream of the day that everyone will use rail transportation", said Normand Parisien, the Quebec director of Transport 2000, a lobby group that supports public transit. Although Parisien is thrilled with the Blainville train, he feels that it is long overdue. "We've been pushing for this train since CP Rail closed the Sainte-Thérèse service in 1980", he said. The Blainville line's success might push governments to bring in more commuter trains. "In the next two years, we will study the possibility of extending the train up to Saint Jerome, and bringing it downtown to Windsor station, among other options", Houle said.

Source: Montreal Gazette, May 26, 1998.

A COMMUNITY WORKS TOGETHER AND... THE BURLINGTON JUNCTION RAILWAY STATION IS SAVED!

A decade after the historic Canadian National Railways Station in Burlington, Ontario, was closed to passenger service, community volunteers who worked to save the building are delighted by the prospect that it will soon be renovated by a private company and used for corporate offices.

Built in 1906 as a combination passenger and baggage depot, the Burlington Junction Station, also known as the "Freeman Station", exhibits the appealing picturesque quality and stylistic features of stations built by the Grand Trunk Railway during its most extravagantly competitive era. The architectural value of the Station and the economic feasibility of its restoration have been confirmed in historical, technical and structural reports prepared from 1988 to 1994.

In 1993 volunteers and community groups, organized as the Save Our Station Committee whose mission was - "to relocate, restore, and reuse the Freeman Railway Station in Burlington, Ontario". The City of Burlington and especially VIA Rail, which took over the building from the CNR in 1986, played key roles in ensuring the project's success. VIA rail effectively "mothballed" the structure, securing it from damage during the years it was unoccupied.

During the past six years the SOS Committee mobilized many partners, and a fundraising campaign veteran. Financial donations and gifts in kind were provided by the Burlington Historical Society, the Rotary Club, the Venture Inn, Homecoming Productions, and many enthusiastic individuals. These funds will contribute to a publicly funded heritage restoration.

The persistence of the SOS Committee, and in particular of its Chair, Ruth Robbers, through six years of changes and delays, kept the Station in the news. Now the Aston Group Inc., an interim management firm based in Burlington, has announced that the station will be restored as a landmark building for a company developing new high-tech systems. Congratulations to everyone involved in the struggle to save this piece of our heritage. Well done!

Source: The Heritage Hearth, Fall-Winter 1997, via Mark Paul

MORE LOCOMOTIVES PRESERVED BY CRHA

Two more significant diesels have arrived at the Canadian Railway Museum. Former VIA 6765 (neé CNR 6765) arrived from the Windsor & Hantsport via the CPR, and, **stop-the-press news**, we report that CP Rail's unique 4000 horsepower C-640, No. 4744, built in March 1971, was delivered to the Museum on July 20, 1998. More details later.

BACK COVER: A West Island commuter train, westbound out of Montreal, and powered by FP7A No. 1302, rounds the curve on the CP line just west of Beaconsfield, Que. on Sunday, September 4, 1994. The extreme telephoto lens makes some very interesting and pleasing effects. The curve looks as sharp as an interurban line, and St. Joseph's Oratory, thirteen miles away, shows clearly, looking as if it was only a few blocks behind the train. Photo by Pierre Ozorák

Canadian Rail 120, rue St-Pierre, St. Constant, Québec Canada J5A 2G9

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