



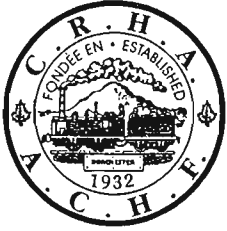
Canadian Rail

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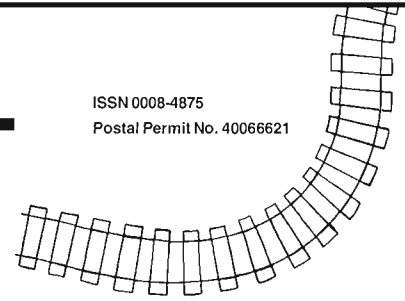


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FRONT COVER: In 1952, just fifty years ago, Canadian National Railways took delivery of 18 multiple-unit cars for service on the Mount Royal tunnel line in Montreal. Six cars were motor units, which were numbered M-1 to M-6 and twelve were trailers, numbers T-1 to T-12. This photo, taken at Deux Montagnes on September 7 1968, shows a six-car train headed by M-5. Three of the cars are in the 1955 paint scheme of green and black, while the others are in the black and white livery introduced in 1961. Most of the MUs served until 1995. In 1969, M-5 was renumbered 6734, and is now at the Canadian Railway Museum.

BELOW: In retirement, 6734, formerly M-5, is seen at the Canadian Railway Museum on September 21 2002, the 110th anniversary of the introduction of electric traction in Montreal.
Both photos by Fred Angus

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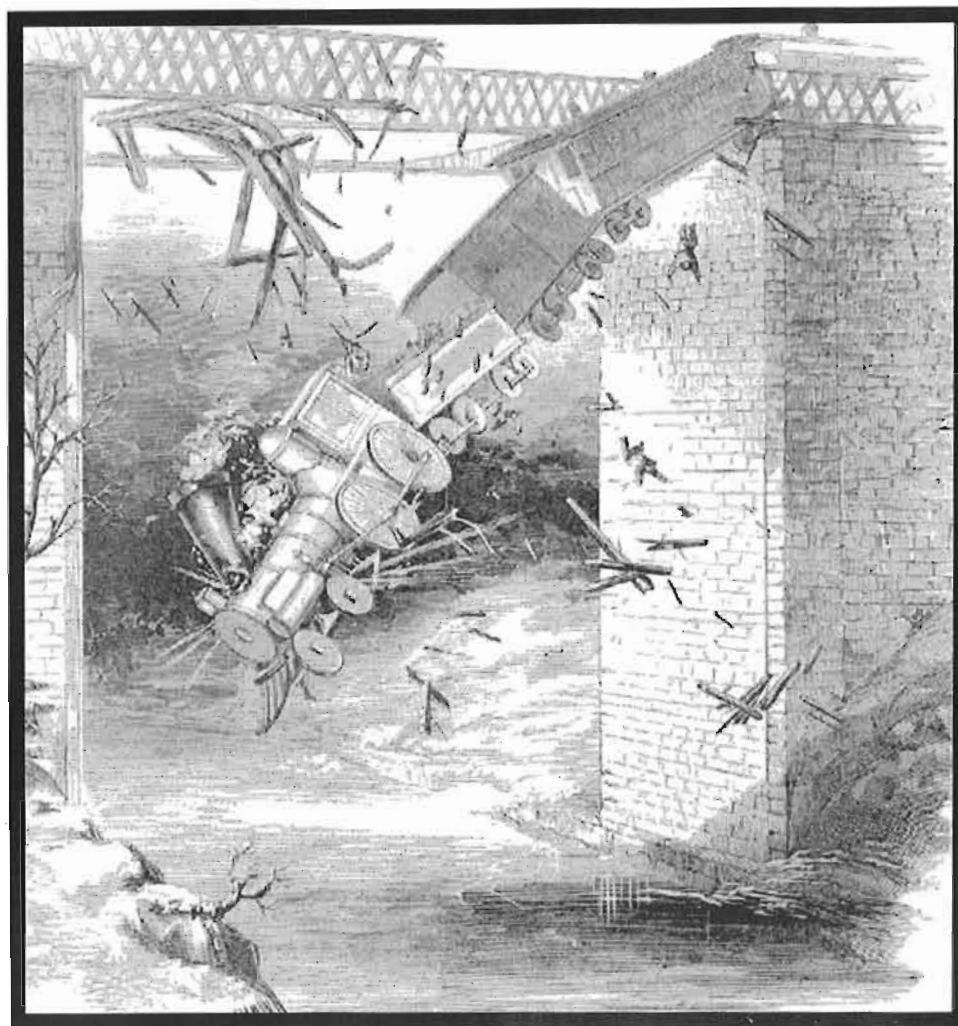
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The Desjardins Canal Disaster, March 12, 1857

Compiled by Fred Angus

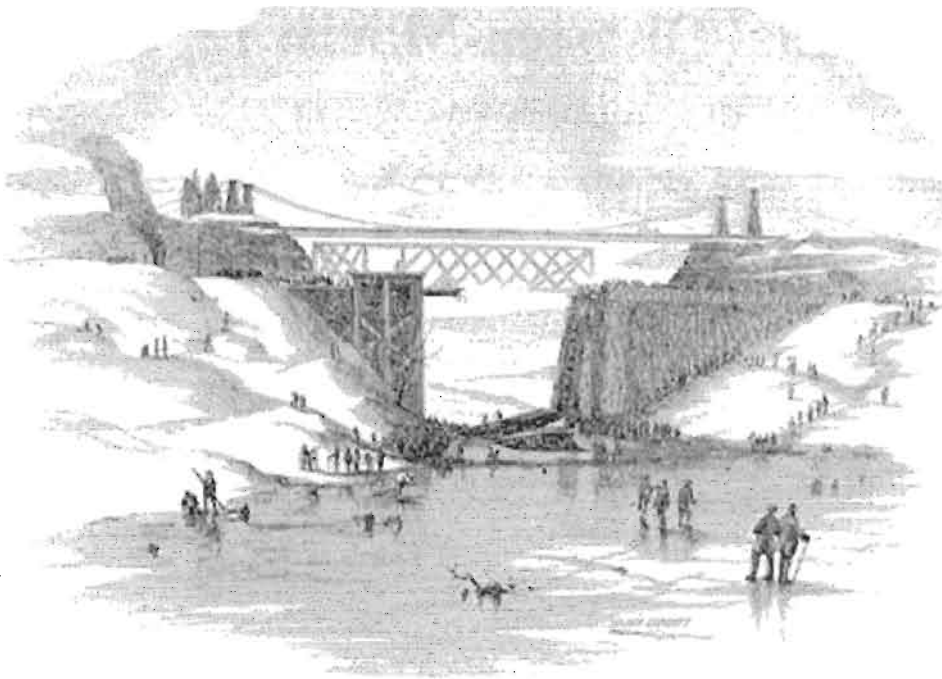


The Toronto railway train breaking through the trestle bridge over the Desjardins Canal, falling sixty feet into the gulf below. From a sketch by Col. Frank Foster, of Philadelphia. Frank Leslie's Illustrated Newspaper, April 4 1857.

At 4:10 P.M. on the afternoon of March 12, 1857 the afternoon accommodation train of the Great Western Railway departed from Toronto bound for Hamilton, thirty-eight miles away. This train consisted of a baggage car and two coaches, hauled by 4-4-0 locomotive "Oxford". On board were 95 or 96 passengers, representing a good cross-section of the population of Canada West. Included were Donald Stewart a merchant of Hamilton, John Wilford a miller from England, Rev. A Booker of Hamilton together with several other clergymen returning from a conference at Toronto. Only an hour or two before, Rev. Booker had preached a discourse on the words "What thou knowest not now thou shalt know hereafter". Timothy Doyle a shoemaker and his brother Patrick a labourer were aboard, as were several women and children, including some entire families

returning home from the big city. However the most prominent of the passengers was Samuel Zimmerman of Niagara Falls, contractor, entrepreneur and banker, often called the "Railway King". In fact he had been in Toronto on business and in his pocket carried the charter for the proposed Canada Southern Railway. Mr. Zimmerman was not the only rich person aboard, for J. Russel, a contractor of Brantford, had several thousand dollars in cash on his person.

The train was scheduled to reach Hamilton about 5:45 P.M., and as that time approached the passengers looked forward eagerly to arrival home again. Sometime on the trip it is believed that Mr. Zimmerman wound his big gold watch (for it was still running 23 hours later) and watched the lights of Hamilton appear in the distance. Before reaching Hamilton, the track rounded the extreme western end of Lake



Ontario and crossed the truss bridge over the Desjardins Canal. Just as the "Oxford" approached the bridge, there was a sudden jolt - a hidden crack had caused an axle on the leading truck to break, derailing the locomotive. The damaged and derailed engine continued on to the bridge where the wheel flanges cut into the stringers under the track. The result was that the locomotive fell through the bottom of the bridge, and one by one, the three cars of the train followed; a fall of sixty feet into the ice-covered canal. About sixty people died including Mr. Zimmerman. It was the worst train wreck in Canadian history up till that time; in fact, in the 145 years since, only one wreck (the one at Beloeil in 1864) has surpassed it in number of fatalities.

Much has been written about the Desjardins Canal disaster, more than the Beloeil wreck which claimed more lives. It is easy to see why. At Hamilton in 1857 the victims were well known members of the community, whereas the Beloeil victims were immigrants that had just arrived from Europe. The aftermath of the disaster is even credited with being one of the many causes of the panic of 1857 which caused such financial hardship in North America later that year.

In many of the numerous accounts of this wreck, it is mentioned that photographs were taken, both of the wrecked train and of some of the victims. Certainly some of the published drawings are said to be based on photographs. However, until recently no such photos were known to have survived. In 2001 Doug Smith discovered, in the National Archives in Ottawa, a photo showing the wrecked bridge and the remains of one of the passenger cars. To the best of our knowledge this photo, one of the oldest Canadian railway photographs, has never been published before, and represents an important historical find.

In addition to this photo we include a contemporary account, in typical Victorian journalistic style, of the disaster. This account is taken from four different publications and

combined together. These are: The Hamilton *Spectator*, the Toronto *Globe*, the Montreal *Gazette* and *Frank Leslie's Illustrated Newspaper*. The latter paper, a U.S. publication, deserves a special note. Little more than a year old (its first issue was in December 1855), Frank Leslie's produced illustrated articles in the manner of the *Illustrated London News* in England. Its issue for April 4 1857 contained extensive coverage of the Hamilton disaster, as well as twelve woodcut engravings, at least one of which is based on a photograph, the original of which is presently unknown. These engravings are also reproduced here, as are some notices and items from other contemporary newspapers. Some of the accounts were submitted by Ken Heard, others from the National Library of Canada

and the Ontario Provincial Archives. The Frank Leslie's paper was from the Hamilton Public Library.

The disaster at the Desjardins Canal was a milestone in Canadian Railway history. It marked the beginning of the end of the "laissez faire" period of railway construction and operation. One of the first results was the "Accidents on Railways Act", passed on May 28 1857, only two and a half months later. This mandated better safety inspection and full reports to the government of structures and equipment on Canadian Railways. The first such report was the well known "Keefer Report" which appeared early in 1859. Although many more terrible accidents occurred in the years ahead, the aftermath of Desjardins Canal was an early step in a process that has made the railways of Canada among the safest in the world.

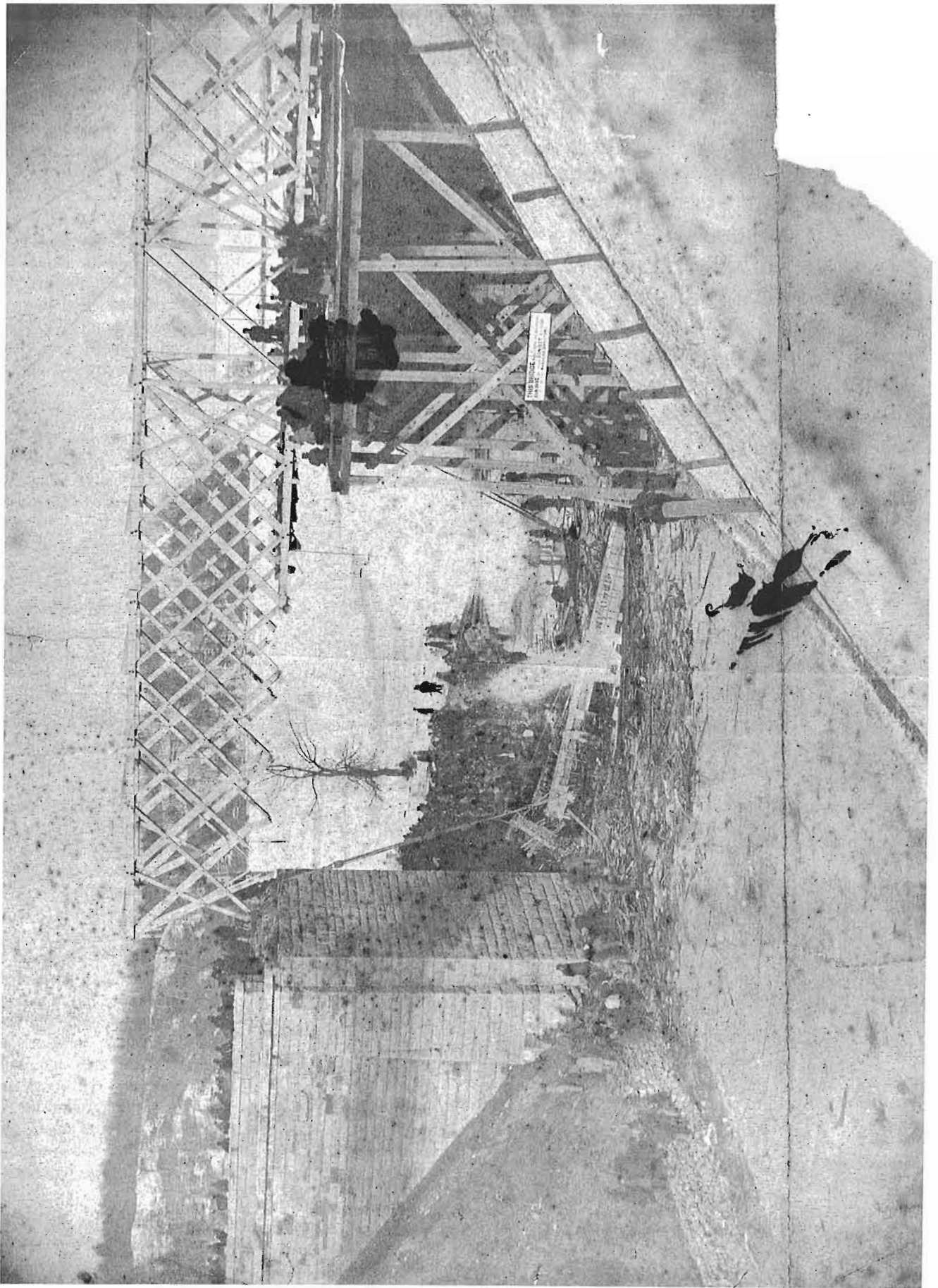
ABOVE: View of the accident taken N.W. from Hamilton Bay, Suspension bridge in the background. From a photograph by D.C. Beere, Esq.

Frank Leslie's Illustrated Newspaper, April 4 1857.

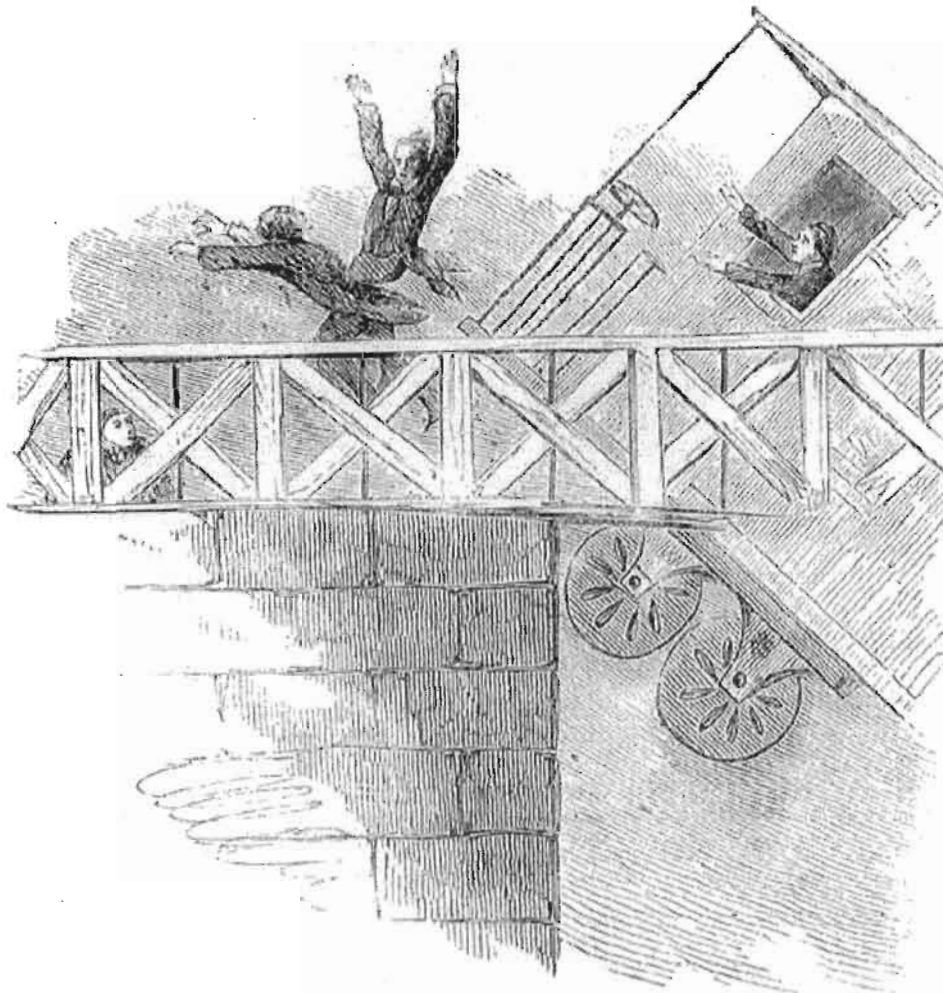
OPPOSITE: A true historical find. An actual photograph of the wreck, taken from the bay side of the bridge. Note the smashed coach in the canal, as well as the damaged structure of the bridge. The sign on the bridge (enlargement below) refers to "This Bridge", "Sun Rise", "Sun Set" and "Managing Director", but the remainder of the inscription is not legible in the photo.

National Archives of Canada, photo No. PA135158.





**THE CALAMITOUS
RAILROAD ACCIDENT
AT
BURLINGTON HEIGHTS!
OVER THE
DES JARDINS CANAL, CANADA.
SCENES AT THE PLACE OF THE DISASTER!
THE BODIES FOUND!
RECOGNIZING THE DEAD!
APPEARANCE OF THE REMAINS OF THE
BRIDGE AND CARS.
THE BRIDGE AND ITS CONSTRUCTION.
THE LAST MELANCHOLY SCENE AT THE
BRIDGE.
Etc., Etc., Etc.**



The conductor and two passengers jumping from the last car as it was going over the precipice.

Frank Leslie's Illustrated Newspaper, April 4 1857.

Hamilton, March 17, 1857.

It may be said surely a national calamity has befallen us. Men who have ever stood in the foremost ranks - capitalists the most shrewd, speculators the most keen, merchants the most far-sighted, clergymen the most earnest - have at one fell swoop been taken from amongst us. The brain wanders and the pen almost refuses to do its accustomed duty when attempting to describe the heartrending scene we have witnessed.

Yesterday being observed as a day of humiliation and prayer, in accordance with the proclamation of His Worship the Mayor, we issued no paper; but as the excitement occasioned by the disaster still continues, and everyone appears anxious to learn the latest particulars relative to it, and the Investigation of the Coroner's jury, we issue a supplemental sheet, containing all the particulars of the accident, including the funeral obsequies and the Investigation so far as it has gone.

The railway train from Toronto (Canada West) was due at Hamilton at a quarter past six o'clock P.M., Thursday, March the 12th. It came on from Toronto as usual, and was proceeding at a moderate speed to cross the trestle or swinging bridge of the Des Jardins canal. The chasm, sixty feet deep, over which this bridge was erected, was made by cutting an outlet for the canal through Burlington heights. At the time of the accident the water was covered with ice about two feet thick.

The moment the train reached the bridge the immense weight crushed through the timbers, and the whole structure gave way, and, with one frightful crash, the engine, tender, baggage car and two first-class passenger cars broke through the severed frame-work, and leaped headlong into the yawning abyss below. The engine and tender crushed at once through the ice. The baggage car, striking the corner of the tender in the act of falling, was thrown to one side and fell some ten yards from the engine. The first passenger car rushed after, and turning as it descended, felt on its roof, breaking partly through the ice, and being crushed to atoms, while the last car fell endways on the ice, and, strange to say, remained in that position.

Five minutes before the accident, the heaviest type of freight engine known at that time, passed over the bridge in safety.

Many persons were standing at the station, a mile and a half distant, watching for the Toronto train to come in, and saw it all disappear. This caused a speedy action to find out the cause. Mr. Hardman, of the heavy freight engine, went right back to the scene of the accident and found out the cause. Undoubtedly, the engine must have been broken, as the left wheel left the rail and marked the sleepers, and so forth, on the track for some fifteen yards before it reached the bridge. The cause of the accident will not be fully ascertained until the engine is raised. We learn, however, that the reason above given (breaking of the axle) is correct, as far as can now be ascertained.

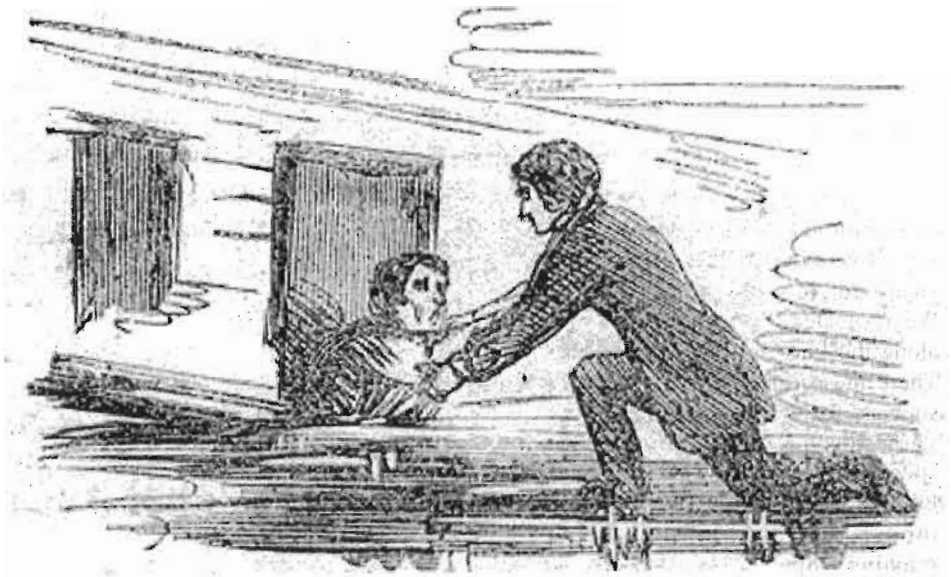
The loss of life was of course frightful. There were 95 or 96 passengers on the train, and the list of those who have escaped only numbers about twenty. As far as we can yet learn, every one in the first car was killed; those who were not crushed being drowned by the water which nearly filled the car. About thirty were in the last car, of whom ten were taken out dead, and most of the others were fearfully mutilated.

The conductor, Mr. Barrett; the deputy superintendent of the line, Mr. Muir, and Mr. Jessop, one of the auditors, who were on the hind platform, jumped off and escaped. The express messenger, Mr. —, Mr. Richardson, a conductor on the road, and the mail conductor were with the baggagemen. The latter jumped over the baggage he had piled up ready for delivery, and escaped with but slight injury, while the three others went down, but miraculously enough were not much hurt. The engineer and fireman went under the ice with the locomotive, and their bodies have not yet been recovered.

The mails, of course, have been delayed. Half the bridge is destroyed, and freight traffic must suffer interruption until it is restored, before which, we should imagine, some weeks will elapse. Arrangements have been made for the interchange of passengers.

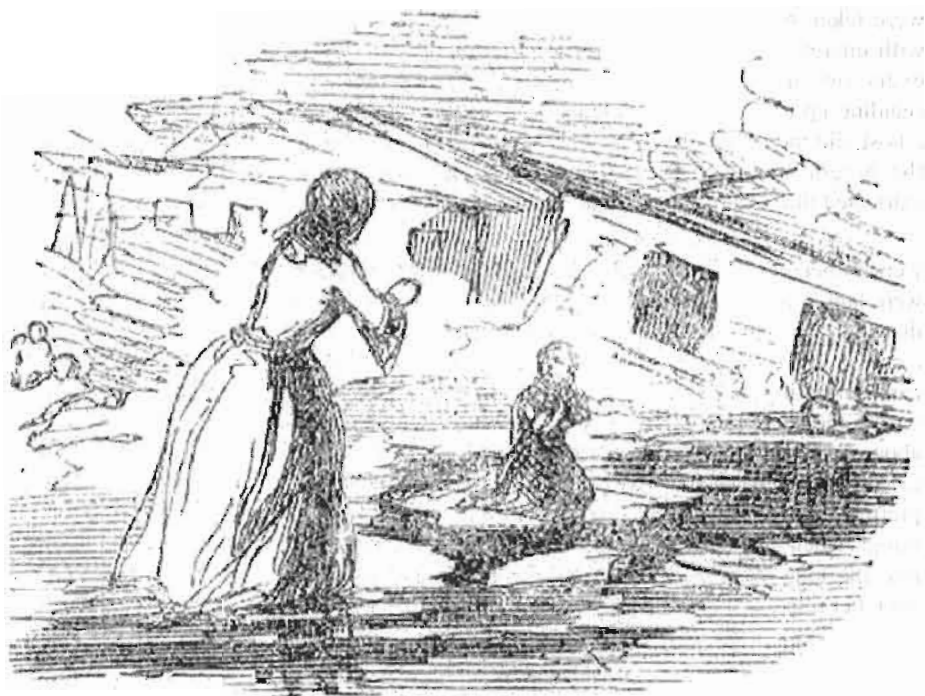
THE SCENE AT THE BRIDGE AND CLEARING OF THE WRECK.

From the splintered ruins of those cars arose cries and shrieks, groans and objurgations of unearthly intensity; while through their ruptured sides and floors protruded the limbs



*The German rescuing his friend from the car window.
Frank Leslie's Illustrated Newspaper, April 4 1857.*

and bodies of scores of the dead, wounded and dying, who but a moment before were in the heyday of happiness. Palsied for a few moments, the bewildered survivors could only gaze helplessly upon the horrors before them. A reaction ensued, and then each flew to the rescue, impelled by a common instinct. Immediate assistance was had from the different shops, and persons engaged on the works at the depot. All night persevering efforts were made to extricate the bodies from the wreck. Rafts were formed on the ice, to enable the men with long poles and hooks to proceed with their mournful



*The rescue of the little girl from a cake of floating ice.
Frank Leslie's Illustrated Newspaper, April 4 1857.*

task in safety. All night and all next day the wreckers persevered in their humane efforts until all the bodies were removed, and the debris of the bridge and the cars was cleared.

The excitement in the city of Hamilton directly the news spread was intense. Hundreds swarmed toward the Great Western Depot and streamed along the line to the fatal spot. There the scene presented was such as to baffle description. Large locomotive lamps were speedily brought. Fires were kindled and a lurid glare was thrown over the shattered remains. Special trains were dispatched to the bridge to bring home the wounded. It was no easy task to descend the steep slope to the canal. Ropes were lowered and ladders attached to them, on which the dead and wounded from the car which stood endways were first drawn up. Then the bottom of the car, which had partly sunk through the ice was hewn away with axes, and the unfortunate passengers, some sadly mutilated and even cut in pieces, and all saturated with water, were taken out. Many worked

with energy and vigor; but who was that noble fellow that every one must have seen, stripped to his shirtsleeves, standing up to his middle in the freezing water, who, himself a host, did more than all the rest? We watched him long from the height above as he hewed away the fragments and extricated the bodies. If ever man deserved a reward, it is he.

As soon as the dead were drawn up the slope they were either put in the cars for conveyance to Hamilton, or were laid in a small house near the bridge. There were no less than thirteen ministers on that train, who had been attending a convention in Toronto. It is said that one family were in the cars consisting of a father, mother and four children. Only one of the children escaped. One of the little victims, a girl, about four years of age, was brought into the house alluded to when we were there. The poor little creature was smiling prettily as if she had been sleeping and dreaming of sweet things when the accident occurred, and had been launched into the long steep of death before the dream had vanished from her mind.

Among the dead was Samuel Zimmerman to whom railways have at length proved fatal; and near him two children, aged one and three respectively, and her who seemed to be their mother. Notwithstanding that Mr. Zimmerman was under the water 23 hours, his faithful watch was still going.

The Globe.

TORONTO, SATURDAY, MARCH 14. 1857.

FRIGHTFUL ACCIDENT ON THE Great Western Railway!

A Whole Train Precipitated into the
Canal !!

OVER SEVENTY PERSONS KILLED!

A national calamity may fairly be said to have befallen us. Men who have stood in the foremost rank have been taken from amongst us. The brain wanders, and the pen almost refuses to do its accustomed duty, when attempting to describe the heart-rending scene we have witnessed.

How Toronto received the news.

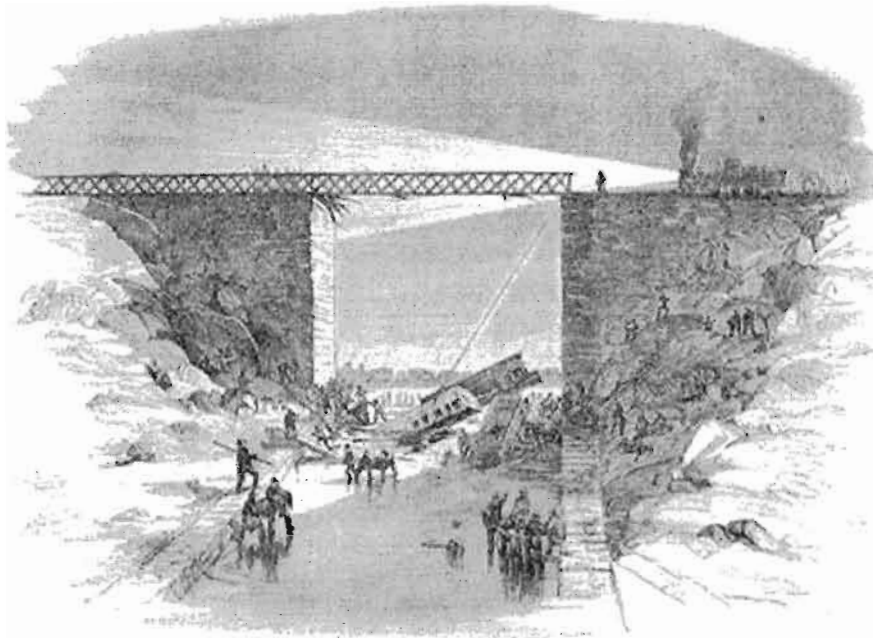
Stratford, and two children between eight and nine years of age, perished. The escape of these seems perfectly miraculous. One of the children was thrown out of a window on to the ice, it knows not how. The other was dragged out of a window, having been up to its neck in water for some fifteen minutes in almost a senseless state. They were a little boy and a little girl, brother and sister. They can recollect nothing after the fearful crash, and being thrown upon their heads. Their mother, father and uncle perished, and Owen Doyle, who saved himself, is their uncle. He saved himself by forcing his way out of a window as the water was rushing in. He remembers swimming on to the ice; and then lost consciousness. James Barton cannot tell how he got out of the window. He recollects but a wild scream - being dashed against the ceiling of the car. Half senseless and half drowned, he made a last spring for a window. He was picked off of a cake of ice a few minutes afterwards, senseless. The two children, marvellous to say, are but slightly injured; and Doyle and Barton are but comparatively little hurt. Doyle had his brother, and sister-in-law, two cousins, and a cousin's wife, and two nieces, all killed or drowned. And what with his own injuries, the fearful excitement of the scene he had passed through, and the loss of so many near and dear to him, the poor fellow wandered about almost bereft of his memory and his senses. Barton's father was also lost; they were sitting

At the railway depot, when the sufferers were brought in, crowds assembled anxious to hear who was dead, and to know if any of their friends were there. The corpses were taken into one of the large baggage-rooms, where Coroners Bull and Roseburgh proceeded to have them examined, and, when possible, identified. In an out building, adjoining the Station House, at Hamilton, were sixty corpses laid out on the floor, including men, women and children.

As soon as the intelligence of the catastrophe reached the city, Major Boker and Captain Macdonald's Companies of Volunteers marched to the scene, and every credit is due to them for their conduct. The pressure of the crowd had all but forced in the strong doors of the depot when the Artillery Company arrived. They formed a cordon around the room, which was respected. The rifles marched on to the bridge.

WHO ESCAPED, AND HOW.

Every person in the first passenger car, except Owen Doyle, James Barton, of



The conductors of the railway raising the ruins of the cars. From a sketch by Mr. Lum. Frank Leslie's Illustrated Newspaper, April 4 1857.



The people living in the vicinity of the broken bridge hunting among the ruins for the dead and wounded. Frank Leslie's Illustrated Newspaper, April 4 1857.

together when the car was turned upside down, and they were dashed against the top of it.

The escape of Richardson, Mr. Urquhart of the express, the mail conductor, and the baggage master, was equally marvellous. When the locomotive and tender went into the abyss literally, the baggage car swung round apparently as it was going over, and broke loose from the tender. The consequence was, it struck on the ice to the left of where the locomotive disappeared; and slid, so strong was the ice, a

short distance. It never overturned; and its three inmates, though thrown among trunks and all sorts of things, strange and happy to say, escaped with but barely trifling bruises. The conductor, hearing the smash of the bridge, and standing at the open door of the car, leaped out just at the brink of the abyss. He escaped unhurt.

In the second car, the persons saved were the Conductor, Mr. Barrett, the Deputy Superintendent, Mr. Muir, and Mr. Jessop, an auditor. They were on the platform of the

last car, and jumped off when they heard the concussion. Of those hurt in this car, were Dr. Macklem and Mr. T.C. Street, of the Falls. The former is very much injured in the head, and had a contusion in the side but it is hoped not seriously. Mr. Street's collar-bone was broken, his arm very badly hurt, and he was otherwise much bruised. Mr. Curtis, of Ingersoll, was dreadfully injured in the spine, and was expected to die every moment. Mr. Barton, junior, of Woodstock, had his back broken, and is otherwise fearfully hurt.

STATEMENT OF MR. MARSHALL.

W.R. Marshall, of Woodstock, was one of the few fortunate persons who were not killed by the fearful accident. From his statement, which appears in the *Spectator*, we make the following extract:

"There were no incidents of a striking nature on the trip from Toronto to the junction with the main line near Hamilton. When within sight of the Hamilton station, Mr. Beatty asked me 'what time it was'. I looked at my watch and told him it was a quarter to six. About this time the train began to go slower. Nearly half a minute afterwards I perceived quite a consternation in the cars, passengers running to and fro, apparently much excited. At the same time, I felt a strange sensation, as if caused by something impeding the motion of the train. It was not a shock, but at the same time everyone seemed to think that something was wrong. As I was not aware of the dangerous character of the place we were approaching, I retained my seat, and advised others to do the same. A slight pause ensued, myself and those sitting with me remaining still, but anxiously waiting the result, when with one jerk we were precipitated into the yawning abyss below. While descending I retained perfect consciousness, and felt we were going down some awful precipice; not a voice was heard in the descent. On reaching the bottom there was one general crash, after which I found myself in total darkness, hemmed in on every side; and crushed almost to suffocation by human bodies and broken seats. The blood oozed from my mouth, and it seemed as if every breath I drew would be the last. The next few minutes were the most awful I ever witnessed: oh, that it may never be my lot to

The Montreal Gazette.

SATURDAY, MARCH 14. 1857.

TELEGRAPHIC.

VIA MONTREAL LINE.

[Reported for THE MONTREAL GAZETTE.]

DREADFUL RAILWAY ACCIDENT.

FRIGHTFUL LOSS OF LIFE.

HAMILTON, 12th March, 1857.

Another of those frightful accidents which human forethought appears inadequate to the task of preventing, took place this evening near this city. The train from Toronto, which is due at 5:45, had scarcely touched the swing-bridge over the Desjardins Canal, when it gave way, and the whole train was precipitated into the water, falling a distance of 40 feet. The engine, tender and baggage car were all completely buried in the water. The forward passenger car, in descending, was turned upside down, leaving a portion of it only above the water. The forward end of the last passenger car rested upon either the engine or baggage car, and falling back upon the wall supporting the bridge, remained in nearly an upright position. Immediate assistance was had from the different shops and persons engaged on the works. All that were in the last car were taken out mostly wounded, and, we are sorry to say, too many dead. A hole was cut in the bottom of the car which lay across the canal, and the bodies taken from it as soon as possible; but this could not be otherwise than a slow operation, when it is considered how cold the water is at this season of the year, and that the depth was sufficient to hide an engine, tender and baggage car.

Mr. Muir, the Traffic Superintendent, was on board, but fortunately jumped off as the cars took the leap. Mr. Barrett, Conductor, escaped unhurt, as did also the Express Messenger, Post-Office Clerk and Baggage Conductor.

Among the killed is Mrs. P. S. Stevenson, of Hamilton. Seventeen bodies were taken to the baggage room, with the exception of two, who were recognised.

Montreal received the news by telegraph late on the night of March 12.

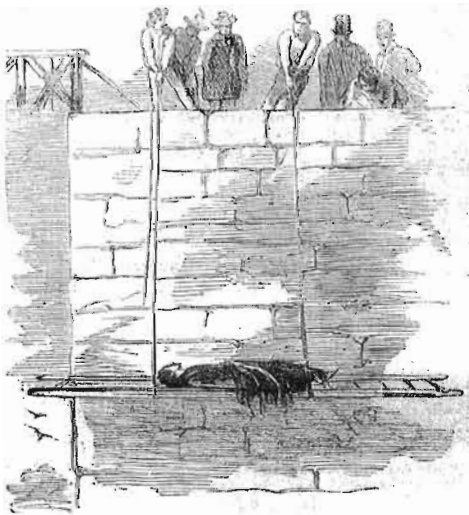
experience the like again. In this fearful situation were placed 80 or 90 human beings, who, a few moments before, rejoiced in excellent health and spirits, their minds occupied with worldly cares or pleasure; little thinking they would be so soon called into the presence of their Eternal Judge. Some prayed, others called upon the saints, others swore fearful oaths. What an awful lesson does this shocking event teach those who habitually put off making their peace with God to some future day, or to a death-bed?"

GOT OUT OF THE WINDOW

Henry August, passenger from Toronto, escaped from the first car. The escape of this person was most wonderful. He is a German; and he and the last named passenger were sitting together on the rear of the first passenger car. The moment they heard the first concussion, they got up and rushed together to the door, the latter only reached the platform. He jumped off just three feet from the chasm. The other car rushed by him and was gone. He stood for a moment paralysed. He then ran down the hill, and was the means of saving from drowning his companion who was not in time to reach the platform. He dragged him out of a window, and comparatively unhurt.

A woman, who lives near the scene of the disaster, and who was the first to witness it, gives some interesting particulars about the two children - the Doyles - who so miraculously escaped. She rushed down the hill to the cars; indeed the poor woman literally rolled down, for it was so steep and slippery she could not keep her feet; and the first object that met her attention was the poor little girl, about eight years of age, on a cake of ice. The little thing said, "Oh, don't mind me, save my brother", and the poor little fellow was at the moment with his chin barely above the water, at the top of one of the

windows, imploring some one to drag him out. The woman, though the ice was broken for some distance round the car, managed to reach him; and after rescuing him, rushed up the hill with one child in her arms, and got a passenger, who was himself badly wounded, to carry the girl on his back. She put them to bed; and strange to say, they got up with scarcely a mark. Owen Doyle, the uncle of the little girl, saved her by



Five more illustrations from Frank Leslie's Illustrated Newspaper, April 4 1857. LEFT TOP: Grappling in the canal for the dead. LEFT BOTTOM: Hoisting dead bodies by the aid of ladders upon the top of the abutment. RIGHT TOP: Passengers crossing the canal on the rafts. RIGHT MIDDLE: Relations and friends searching among the dead bodies laid out in the large room adjoining the station house. RIGHT BOTTOM: The Doyle children carried up the hill by their preserver and a passenger.

clasping her to his breast when he felt the car overturning, and throwing her out of the window after the crash. The little boy felt some one take him in his arms and fall under him, but he knew not whom. It is difficult to conceive a more melancholy spectacle, than these two children looking on the mangled remains of their mother, father, and nearly all who were dear to them.

RECOGNIZING THE DEAD.

Among the most harrowing scenes attending this fearful catastrophe, are the witnessing the unhappy relatives recognizing the mangled remains of husbands, fathers, mothers, brothers and sisters. Yesterday morning the wife of Mr. Morley arrived from St. Catharine's, to pick out of the many dead his body. The scene was heartrending as she passed from one dead body to another, all marking death with greater horrors by being more or less mangled. At last

one, even more distorted and mangled than the rest, was come to; and a wild scream but too well told her tale of woe. And in a large storehouse, strewed with dead bodies, and with others going the rounds to make similar heart-rending discoveries, was she left to kneel down and bewail her bereavement. Whilst on one side of the large building a row of bodies were placed, as yet unrecognized, and questions were asked of every new comer, if he or she knew anything of them, a sob or a moan would be heard in another part, indicating that some one had come from a distance and found all her sad expectations realized. Nor was the circumstance less harrowing, of passing the stranger by, who, far from his home, and far from those who were dreaming of his return, there lay, a mangled, unrecognized, unwept victim of a railroad disaster. Here was evidently a poor Irish laborer; his pipe was still in his hand; and a smile played over his kindly countenance. One passed, yet another, and still another, and

no one knew him. God only knew the grief that some would feel who did know him. Here again linger a larger group. They are looking at the figure of a woman, once beautiful, and though her hair lies tangled and wet, and her face is distorted from the effects of drowning, she still charms that idle crowd with a melancholy interest. She has a marriage ring on her finger. Two locketts are on her breast; and a brooch is suspended by a yellow ribbon round her neck. For whom did she wear them? Who were dear to her? To whom was she dear? No one knew her. God help her! she alone then required to be but recognized by him! And so passed the scene. Here a moan and a tear marked the recognition of the mangled remains of a friend or a relation. There strangers, with heavy hearts, gazed on those who were unwept; and though of themselves, if ever such a lot should be theirs. There may be scenes of sorrow and of horror, but who can conceive aught so utterly heartrending, as when people go away in peace and happiness, to return this evening, or to-morrow, and are first heard of as mangled by drowned by such disaster.

THE EXAMINATION OF THE PAPERS AND LETTERS OF THE DECEASED.

This was little less melancholy than the recognizing their dead bodies. In the pocket of one would be found letters from his wife and children, wishing him home, and sorrowing for his absence. Another died with daguerreotypes on his breast of those he loved most on earth. A mother's letter was found in this one's pocket, asking relief, and saying she was ill. The money for relief was found side by side with the letter. Another's name was learned by the letters of those who loved him. And yet another was hurrying home to console the sick or the dying. Such were some of the incidents.

THE REMAINS OF THE BRIDGE AND THE CARS.

A vast concourse of people gathered round the scene of the disaster yesterday. All day men were engaged breaking into pieces the first passenger car, which had been nearly submerged. It was found impossible to raise it bodily. The locomotive and tender are still under water. The second passenger car was broken up, and carried away the first evening of the disaster. The bridge has been allowed to remain precisely as it was broken; and will, we apprehend, be allowed to continue so until after the inquest, and after thorough inspection by competent engineers. It was a matter of utter astonishment to every one, how any person could have escaped, after such a fearful fall. The walls on either sides are of very solid masonry; the adjacent banks are

ST. PATRICK'S DAY.



At a Meeting of the Joint Committee of the Young Men's St. Patrick's Association, and the Catholic Temperance Society, held in the Reading Room of the Association on Saturday 14th Inst.

John O'DONOHUE Esq., moved, seconded by JOHN SHEA Esq., and

Resolved, that on the part of these Societies, they desire to express their deep sorrow at the lamentable accident which took place on the Great Western Railroad on the 12th Inst., and to convey to the sufferers and friends of the deceased, their sincere sympathy.

Moved by Mr. E. O'KEEFE, and seconded by Mr. J. MURPHY, and

Resolved, that in view of the sad occurrence, the Societies march in SILENCE, with muffled drums, and draped banners, during the procession, on St. PATRICK'S day, the 17th Inst.

CHARLES A. MULDOON,
Secretary.

Toronto, March 17, 1867.

2164-11

As a result of the disaster, St. Patrick's Day celebrations were greatly curtailed in Hamilton, Toronto and other cities in Canada and neighbouring states.

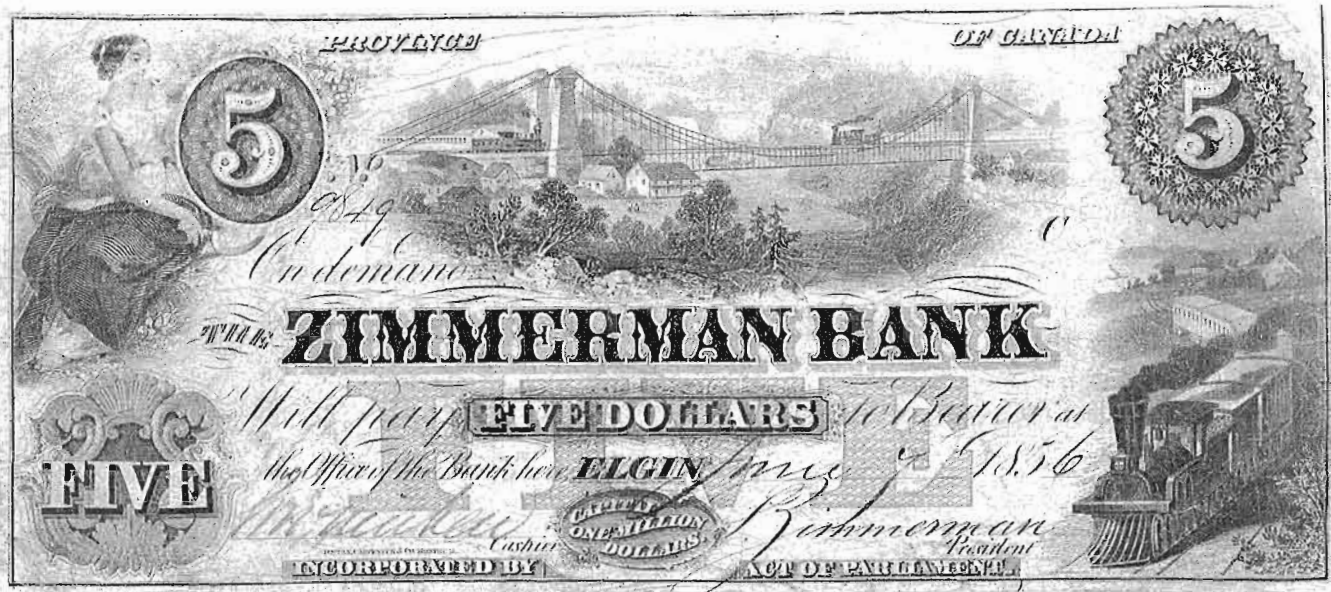
perhaps a hundred feet higher than the railroad. The suspension bridge is thrown over immediately on the right, and is still higher. Then, about sixty feet below the railroad is a narrow deep channel, which looks like a sort of chasm between two high hills. Into this abyss was hurled the ill-fated train. It was just wide enough to let the cars down without touching anything to break their fall. They literally leaped sixty feet into ice and water, one passenger car following the locomotive and completely overturning, and becoming almost submerged; and the other lighting endways upon this. Great as has been the loss of life, considering the number of passengers; yet, looking at the place, it is absolutely wonderful how any one escaped.

OTHER NARROW ESCAPES

The number of narrow escapes is very remarkable, and worthy of a passing reference. One gentleman paid a cabman handsomely to gallop to the depot in Toronto, but arrived just too late; another was on the cars, but got off for some trifling purpose at the suggestion of a friend and was left; another was detained by an invitation to dine with a Cabinet Minister; another procrastinated, he knows not why, till it was too late; though he desired to take that train. Others, again, stayed over to see Miss Nickinson perform at the theatre; another missed the cars by half a minute at Port Credit; another, the same at Waterdown; another got off and was left behind at Wellington Square. A lady who was killed was taken on in the morning on her way down, after the train had started. Such are the trifling circumstances by which life's tenor is held, or forever snapped asunder.

HOW THE ACCIDENT WAS FIRST DISCOVERED.

There is but one small house, belonging to the poor woman who behaved so nobly by the Doyle children near the fallen bridge; and she was looking out of the window as the train approached. She says the catastrophe made little noise. The train seemed to sway to one side, and then all disappeared. Probably the swaying was the first passenger car overturning. She says she saw a man leap from the locomotive immediately before it disappeared. This was likely the engineer, as he was found with his neck broken on the ice. At the same time one of the workmen at the station house - it is about a mile distant from the broken bridge - who was watching the train coming in saw the steam suddenly stop, and a sort of dust arise. In a second there was no train to be seen. The alarm was at once given; and we believe that all persons connected with the railroad have exerted themselves most assiduously since, to render all the assistance they could. The crash was not heard at the depot.



ZIMMERMANN BANK.

THE business of this Bank will be conducted as usual, and its Notes redeemed in Gold at the Counter as heretofore.

J. W. DUNKLEE,
Cashier.
2164-1m

Clifton, C. W., March 17, 1857.

TOP: The death of Samuel Zimmerman caused great consternation in the corporate and financial circles in Canada. Besides his railway connections, he was also the founder of the Zimmerman Bank in Elgin, later Clifton, near Niagara Falls. It was here that he owned the Clifton House, a large hotel. It is said that a company, in which Zimmerman had an interest, built the bridge over the Desjardins Canal and skimped on the construction. If this is true, it is a great irony that Zimmerman was one of the victims when the train fell through the same bridge. The five dollar banknote shown above was issued in 1856, less than a year before the disaster. Ironically it depicts a bridge! Some notes of this bank also showed the Clifton House.

ABOVE: Soon after the disaster the Zimmerman Bank published a reassuring advertisement indicating that business would go on as usual and the notes would still be redeemable in gold. All was not well, however. The Zimmerman heirs sold the bank, which had never been overly sound anyway. It was renamed the Bank of Clifton and became a very shady operation. Soon it failed, with total loss of funds to all depositors and noteholders.

RIGHT: The funeral of Samuel Zimmerman was a very elaborate affair, held with full Masonic ritual. The announcement was published in numerous newspapers, this one immediately followed the official notice of mourning by the City Council of Toronto.

New Advertisements.

THE Members of the Common Council of the City of Toronto, deeply sympathizing with the relatives and friends of the sufferers by the late disastrous Rail way accident near Hamilton, will refrain from meeting for business this evening, in order to afford an opportunity of manifesting a last evidence of respect to the remains of the unfortunate victims.

JOHN BUTCHISON,
Mayor.

Mayor's Office, Toronto, }
March 16, 1857. } 2163-14

Funeral of the Late Mr. S. Zimmerman.

THE Brethren of the Provincial Grand Lodge of A. F. & A. Masons of Canada West, and the Fraternity generally, are respectfully invited to attend the FUNERAL of our deceased Brother, SAMUEL ZIMMERMAN, on Monday next, the 16th inst. The procession will leave Clifton Lodge, Niagara Falls, at 1 P. M. The Brethren to appear in full Masonic clothing.

THOS. O. RIDOUT,
D. P. G. M.
2162-14

Toronto, March 14, 1857.

POEM COMMEMORATING THE DISASTER

The following two verses are from a poem, of six stanzas, entitled "On the Recent Calamity". It was written by Harriet Annie, and appeared in the *Hamilton Spectator* on March 20, 1857.

The fire was on the hearth, the sun was set,
The evening meal was spread
When round the city rung the direful sound,
"Thy loved are dead."
Tears for the dead - sad tears,
Yet doth the rainbow glimmer on the cloud,
And hues of Paradise doth brightly beam
On pall and shroud.

Tears for the dead - sad tears, Widows and orphans weep
heartbroken now,
Why did the storm beat down upon their heads?
In grief they bow.
Ah! humble be our plea.
His love to ask upon our heart's plowed sod,
Our answer to the mystery must be,
The will of God.'

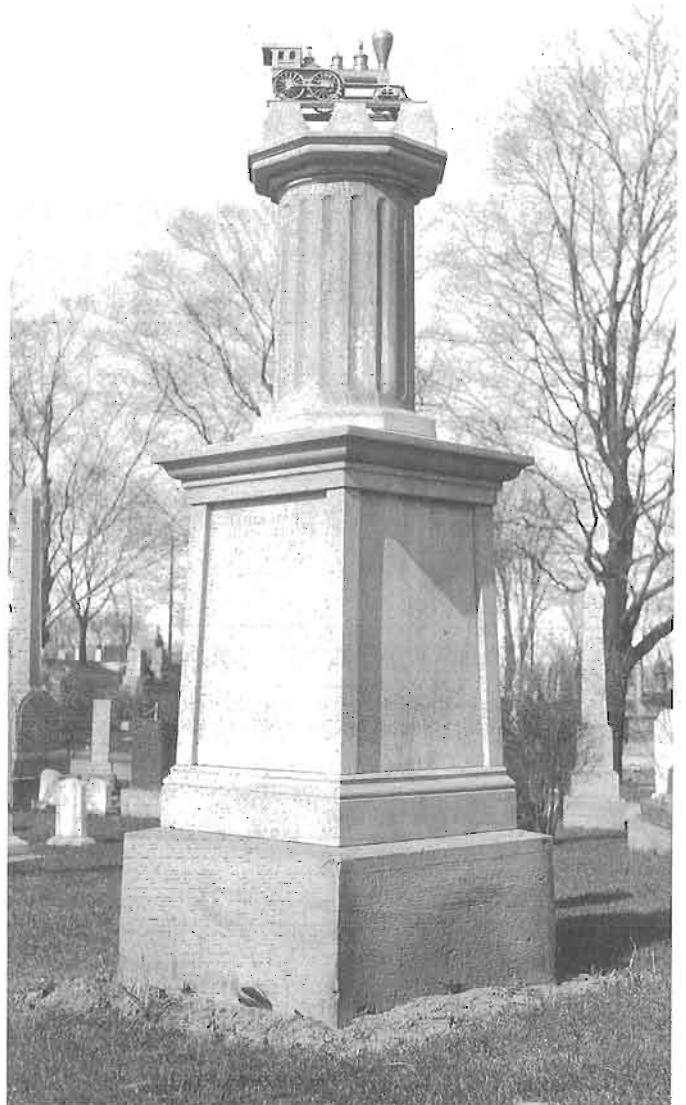
B O A R D
OF
RAILWAY COMMISSIONERS
OF
C A N A D A .

REPORT
OF
SAMUEL KEEFER, ESQ.,
INSPECTOR OF RAILWAYS,
For the Year 1858.

PRINTED BY ORDER OF THE BOARD.



HAMILTON:
PRINTED BY GILLESPIE & ROBERTSON, COURT HOUSE SQUARE.
1859.



ABOVE: The monument in Hamilton Cemetery to the victims of the disaster of 1857. It is surmounted by a model of a 4-4-0 locomotive of the 1850s. This photograph was taken on April 15 1927 by John Boyd (1865-1941).

National Archives of Canada, John Boyd Collection, photo No. PA87661.

LEFT: One of the results of the Desjardins Canal disaster was the passage of the "Accidents on Railways Act". This occurred on May 27 1857, only 76 days after the wreck. As a result of this act, a report was made by Samuel Keefer, inspector of Railways. The first such report covered the year 1858, and was printed in Hamilton in 1859. The Keefer Report is of very great interest to railway historians for it lists practically every locomotive then on the railways of Canada, together with such information as builder, date of construction, basic dimensions and mileage run. Most of this information is not found in any other source.

The legend of the “Lost Locomotive”

by Jay Underwood

The power of any local legend is the irresistible force of its longevity, and the allure of its vague, often romantic details. Such is the case with the lost locomotive of Grand Lake, a legend that Jim Camano, former member of the NSUES (Nova Scotia Undersea Exploration Society) is determined to prove, or disprove. The now-defunct SUES was a volunteer group of divers who took out Heritage Research Permits and looked for, and researched, underwater heritage sites.

Local legend says there is a train at the bottom of Nova Scotia's Shubenacadie Grand Lake; that many years ago it derailed, went into the lake and was never recovered. The line has a great deal of history behind it, being the oldest trackage in the province, built by the Nova Scotia Railway in 1856 as part of Joseph Howe's ambitious plan to link Halifax - at some later date - with the other British North American colonies. That dream came true when the Intercolonial resumed construction from Truro to New Brunswick after Confederation in 1867.

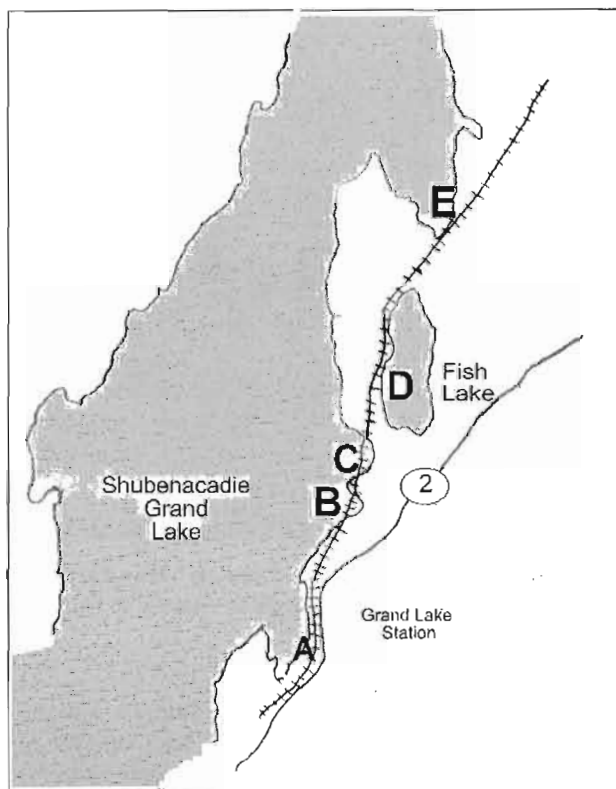
Camano, a dealer in underwater metal detectors in Sackville, N.S., recently completed a heritage report on the sunken Halifax Shipyard tug *Erg*. The Grand Lake locomotive is his next project, but there's little written record to verify the legend, and he's hoping to provoke some discussion to unearth any more information.

The story had been related to me as I displayed a model of the Chignecto Ship Railway at various model railway shows in the Maritimes, and I was inclined to dismiss it as “urban” myth, since I had heard similar stories about “lost” aircraft in the same lake.

It was not until Camano confirmed that his group had located a downed World War Two-era Harvard trainer in the lake that I began to give some credence to the lost locomotive story; still, it is not without its credibility problems.

The first is the lack of any written record of an accident that rendered an engine “unrecoverable.”

Neither Herb MacDonald, who has been compiling a detailed roster of the Nova Scotia Railway's locomotives (1856-1874), or Don McQueen, who has been engaged in a similar project for the Intercolonial Railway, have any record of such an accident.



Map of the area by Jay Underwood

According to MacDonald, of Dartmouth, N.S., “there are no NSR engines unaccounted for in the pre-Confederation period, and all the engines added between the transfer to the Intercolonial in 1867 and mid-1874 are present and hard at work in mid-1874.”

After that, MacDonald admits, “who knows?”

Similarly, while the province's newspapers regularly covered railway accidents, and the Legislature was duly informed of any mishap to befall the province's rolling stock and motive power - no such record appears to exist involving Grand Lake.

Don McQueen, co-author of *Constructed in Kingston*, notes: “The IRC records have several locomotives listed as wrecked, many without other data that has yet surfaced. The other

known ones in Nova Scotia were at Athol, Greenville, Folly Mountain and Thomson - but none that would intrigue the press like a lost locomotive in deep water.”

“There were one or two recorded as ‘went swimming’ but never were abandoned.” McQueen also adds that this doesn't mean the Grand Lake incident didn't happen.

It would have been a rare occurrence, however, for the Nova Scotia press to have overlooked such an event as a locomotive derailed and sunk in a lake! The first spike had barely been driven on the Nova Scotia Railway in 1854, when the politically partisan press began to use mishaps on the railway as evidence to support their criticism of the government in power.

Even the most minor derailment was used as the standard by which to measure the government's disregard for the safety of its workers, its niggardly spending on railway equipment and the right of way, or the evils of a patronage system that put unqualified workers in positions for which they were not suited.

As a practical matter, the only way the press could have missed the loss of a locomotive in a lake (in what was, up until the 1950s, beside a the most highly traveled route from Halifax to Truro) would be if the mishap involved something other than a regular freight or passenger train, perhaps a work train or a switcher hauling “empties” from the industry that once abounded on the line.



A CN gypsum train from Milford to Dartmouth passes Grand Lake, as viewed from Laurie Park. The water in this part of the lake is not deep enough to conceal a "lost" locomotive. (Jay Underwood photo)

If the legend is true, there are five locations on that portion of the railway (between Grand Lake Station and Sandy Cove) that a derailment could have taken place, with topography sufficient to make the locomotive unrecoverable. These sites are located on the map, and all are between Milepost 23.3 (Wellington) and 27.0 (Sandy Cove) on Canadian National's Bedford subdivision:

1. Grand Lake Station (A) - The railway here has its longest contact with the lake and Highway 2, just south of the Wilson Gas outlet, but the water here is not deep enough to conceal a locomotive, and is in a well-used boating and swimming area (Laurie Park), where the bottom of the lake is visible.

2. Grand Lake Station (B) 1st Oakfield - A short embankment cuts across a bay of the lake, and according to the engineer's description listed for Site 4 (below) contains water deep enough to hide a locomotive, or make its recovery impossible.

3. Grand Lake Station (C) 2nd Oakfield - A second bay embankment, with condition similar to Site 4, below. Former CN employee Doug Courtney of Truro, N.S. says he was shown sites 2 and 3 when he worked for the railway, by someone who "was only repeating what he heard, so possibly there is no truth to the story." Courtney served for 38 1/2 years as a car inspector for Canadian National: "It was only once in all the time I worked for the railway that I heard the story about the locomotive in the lake, and I took it with a grain of salt. The person who told me about it did live in Windsor Junction all his life."

4. Gaspereaux Lake (D) - Now known as Fish Lake, this area has deep water, and caused the greatest difficulty

for engineers during the construction of the Nova Scotia Railway. The work was done by Sutherland & Sons, on what was then known as Contract No. 7, and the cost overruns for fill on this section resulted in the dismissal of chief engineer James Richardson Forman in 1858. In his report to the Nova Scotia Legislature in 1859, Forman's successor Charles Laurie said of the area:

"The most important claims are those for excess material beyond the schedule quantities, where the railway crosses a bay or cove of Grand Lake, near Shultz's; and runs through Gaspereaux Lake and several bogs. The soundings upon which the original calculations were based were taken by means of a chain with a weight attached, or with wooden poles, which did not penetrate through the mud to sustaining hard bottom."

Shultz's was the name of a tavern used by Hiram Hyde's mail coaches as a rest stop on the route between Dartmouth and Truro (today's Route 2), and is known today as Grand Lake Station. This area required so much fill, that it was considered impossible to estimate how much had been used beyond the measurable quantities extracted from nearby cuttings.

"By the original survey and schedule of quantities upon which the contractors based their tender, the greatest depth of the lake to hard bottom was represented at 58 8/10 feet, and the quantity of the filling required, 54,109 cubic yards. When the contractors had been at work about six weeks, they discovered that the depth and the quantity were both greater than represented, and commenced keeping a record of the number of wagon, cart, sled, and boat loads deposited in the embankment.

Between the months of March and August 1857, the contractors were allowed 14,000 cubic yards more material in this embankment, and 36,000 more in other embankments than the schedule quantity, which, however, was deducted or kept off in September 1857.

It was not until the winter of 1857-8 that proper soundings were taken, which did not, however, embrace the whole embankment, as on the outer or lake side no bottom was found for a distance of three chains at a depth of 109 feet, being the whole length of the rods used. The soundings made during the past winter, which were taken with great care, gave a greatest depth on the outside of 139 3/4 feet to hard clay bottom, while on the inner side, the depth was only 33 feet, showing that the base of the embankment rests on a very steep sloping surface.

A portion of the bottom is an irregular ledge of rocks, and other portions are hard clay overlaid with soft mud. This great irregularity renders it impracticable now to obtain an accurate measurement of the quantity by soundings."

Clearly any locomotive that went off the tracks on the Grand Lake side of the embankment would be lost in very deep water, and if it went off on the Gaspereau Lake side would possibly be lost in the "bottomless" mud below its surface.

5. Sandy Cove (E) - The only passing siding still in use between Milford and Kinsac, the embankment is steep, but where it skirts the lake, is too shallow to either hide a locomotive, or prevent its recovery, even if it was only to scrap the engine.

If the legend is not true, it may be that it is a corruption of two events in which locomotives were lost at sea while in transit for the Nova Scotia Railway.

In the first event, two engines built by the Nielsen Company of Glasgow were lost off Islay in August of 1857 when the ship *Thomas* sank. The event is recorded in the engineer and accountant's reports to the House of Assembly.

The second loss involves the ship *Equator*, which was caught in a storm during its passage from Portland, Maine to Halifax in July of 1866, carrying a locomotive for the Nova Scotia Railway, built in Kingston, Ont.

In this case, according to research by Harry Dodsworth of Ottawa, the ship did not sink, but being caught in a storm, the engine may have been cast overboard. The journal of the House of Assembly for 1868 refers to the locomotive as having been "lost from" the *Equator*, and not that the ship was lost. *Equator* ran a regular route between Portland and Halifax, and the weather was frequently inclement, as the *Halifax Morning Chronicle* noted on a number of occasions:

"Monday, December 31, 1866 - The wooden screw steamer Equator, arrived here on Saturday night from Portland, Maine, with a cargo of flour. She reports having experienced very boisterous weather during the passage. The steamer accidentally came in contact with Hart's Wharf, by which mishap some of the main timbers of the structure were broken and several of the piles disturbed."

As proof the ship did not sink in 1866, Dodsworth points to the newspaper report of January 1, 1867:

"The steamship Equator, which arrived here from Portland, Maine, during Saturday night, brought 4900 barrels of flour, 1023 bags of wheat, 100 packages of butter; 20 bundles of leather, 40 rail car wheels, besides a quantity of general merchandise."

The only other comparable event that might give rise to a legend of "lost" locomotives, appears to be the sinking



The first of two coves crossed by the CN mainline near Grand Lake Station. The water on the lake side (to the right of the picture) is more than 100 feet deep. (Andrew Underwood photo)



VIA's Truro-bound "Ocean" passes over the second of the coves of Grand Lake (seen in the background) before entering Oakfield and passing by Fish Lake. (Jay Underwood photo)



Fish Lake, once known as Gaspereau Lake, has a muddy bottom of almost unfathomable depth. A locomotive derailed here would not only be irretrievable, but hidden for years, and is perhaps well preserved in the mud. (Jay Underwood photo)

of a barge carrying rails and bridge iron for the Sackville River bridge on the Nova Scotia Railway in 1855, in the Bedford Basin.

It is also possible that the legend refers to another Grand Lake, this one in Cape Breton, which was skirted by the Sydney & Louisbourg Railway, a stretch most recently operated by the now defunct Cape Breton Development Corp. (DEVCO) railway.

S&L historian Glen Smith of Sydney, Cape Breton says there is a similar legend locally, and notes the railway does cross part of the lake on a causeway, but as with the Halifax County Grand Lake legend, details are scarce: "I have heard it spoken of, often in hushed tones on dark and foggy nights."

Such is the grist of legends.



CN train 136 heads into Halifax, seen here at Sandy Cove, where the water is not sufficiently deep enough to conceal a derailed locomotive. (Jay Underwood photo)

A Quartet of Stories On Early Electric Railways

Recent research in libraries in Ontario has uncovered numerous items about early electric street railways in Canada. In this issue of Canadian Rail we include some of this material. Included are two of the earliest of Canada's electric railways, as well as information on the "accelerator" car, very few of which came to Canada, but one of which made history.

1. The Windsor Electric Street Railway



A painting entitled "A Gay Race in Walkerville 1886" showing a contest between the first electric car and a horse-drawn sleigh. Although the appearance of the car is quite accurate, it is not certain that such a race actually took place, since winter operation was soon abandoned and the horses returned to duty. Collection of Fred Angus

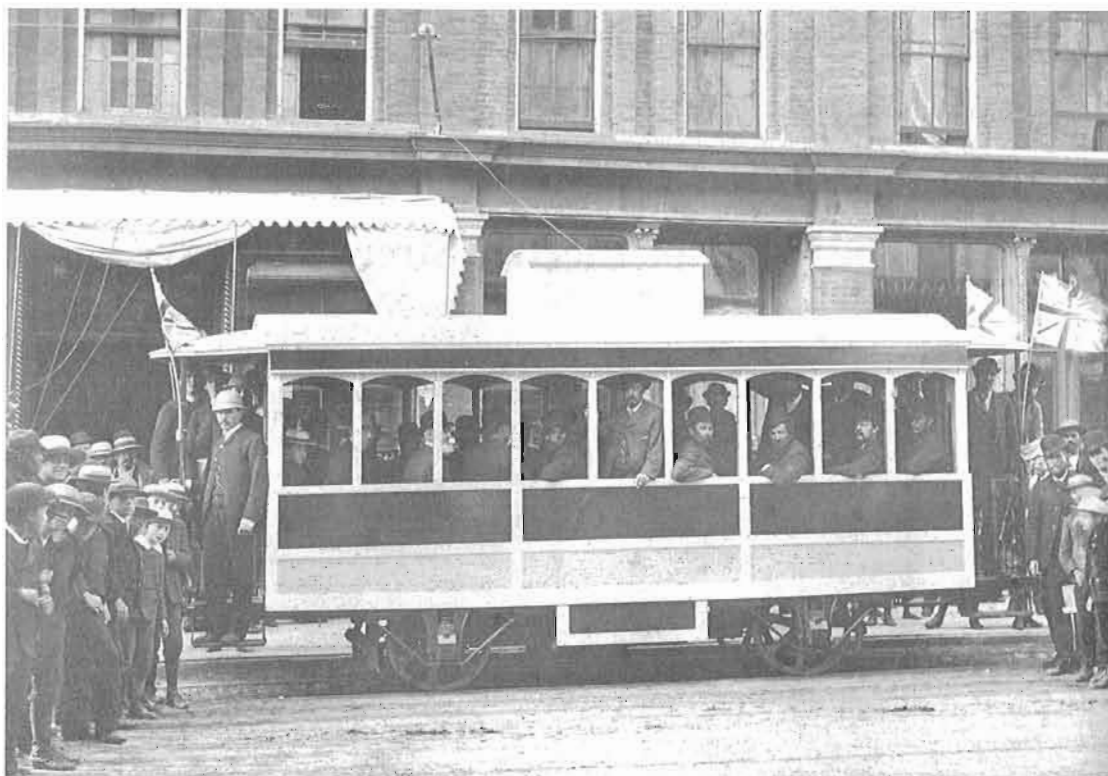
The first electric street railway in Canada began operation in Windsor, Ontario on June 9, 1886. Although an electric railway had been in use at the Toronto Exhibition since 1884, it was only a small operation within the grounds and it only ran during the short time each year that the Exhibition was open.

Credit for the first electric street railway must go to J.W. Tringham who visited England in 1885 and saw the Volk's Railway, a small narrow-gauge line along the seaside in Brighton. This pioneer electric line was opened in 1883 and is still in service today after 119 years, the oldest electric railway in the world. Upon his return to Canada, Mr. Tringham became a strong advocate for an electric railway from his home town of Windsor to Walkerville, and extending throughout Essex county. Early in 1886, capital was raised and a franchise was secured from the city. Work soon began on construction and, despite numerous difficulties inherent in any new technology, the line began service on June 9.

Unfortunately, despite its initial success, dark days were ahead for the little railway. Less than two months after the triumphant inauguration, Mr. Tringham died. With him

also died the ambitious plans to build electric railways throughout Essex county and other parts of southern Ontario. Then came the winter of 1886-87, one of the worst on record. It was soon obvious that the little electric cars could not cope with winter conditions and the horses came back on duty, often pulling sleighs over the frozen streets. It is not entirely certain how much, if at all, the electric cars ran during the next four and a half years, but most of the street railway was operated by horses during that period. Finally, in 1891, improved electric railway technology permitted the Windsor lines to be re-electrified. This time it was fully successful, and electric cars ran for 48 years until all street car service in Windsor ceased in May, 1939.

The real reason for the initial failure of the pioneer Windsor electric railway was simple; the technology had not advanced far enough. By 1891 it was a different story, and the street car had begun its great advance to most major cities in Canada. So it was that the title of Canada's first electric line *that kept going once it was started* must go, not to Windsor, but to St. Catharines. This will be the subject of the second part of our compilation.



ABOVE: This photo depicts the first run of the electric railway in Windsor on June 9, 1886. Note the large box (perhaps containing resistors) on the roof, also the fact that the car has not yet been lettered.

BELOW: Some newspaper accounts. All are from the Amherstburg Echo unless otherwise indicated.

Windsor Town Council has finally passed the by law granting a franchise to the Electric Railway from one end of Sandwich Street to the other. March 19, 1886.

The committees appointed by council have located the electric line along the north side of Sandwich Street. April 9, 1886.

Work on the electric railway is progressing rapidly. April 23, 1886.

Walkerville citizens are in high glee over the prospects of a speedy completion of the electric street railway. May 21, 1886.

Windsor Electric Railway Co. have commenced laying the iron on the track. A station is being constructed at the eastern end of the line. May 21, 1886.

Windsor deserves to be proud. Its citizens have a manifest right to tilt their heads at several degrees further back and to swell out their chests several inches forward. We have an electric street railway. No other place in Canada has such a road. Detroit has been dreaming about such an enterprise for some time, but the slow people of that place hadn't the nerve to tackle such a novel enterprise until they had seen how Windsor got along with it. The problem has been solved. The railway is a reality, as we can now scoot up to Walkerville on a streak of lightning, and we'll soon have the same motive power for our trip to Sandwich and beyond. Bully for Windsor! Hurrah for Tringham! Windsor Record, June 10, 1886.

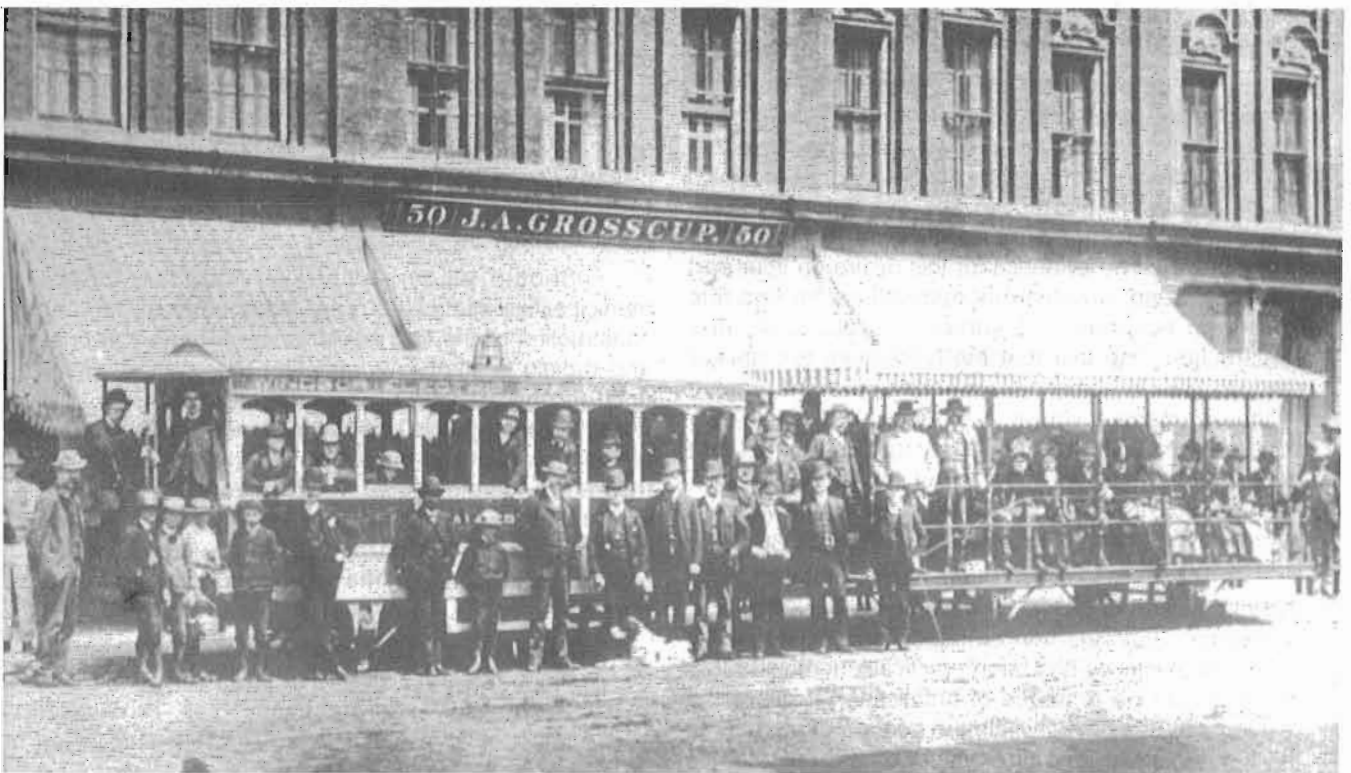
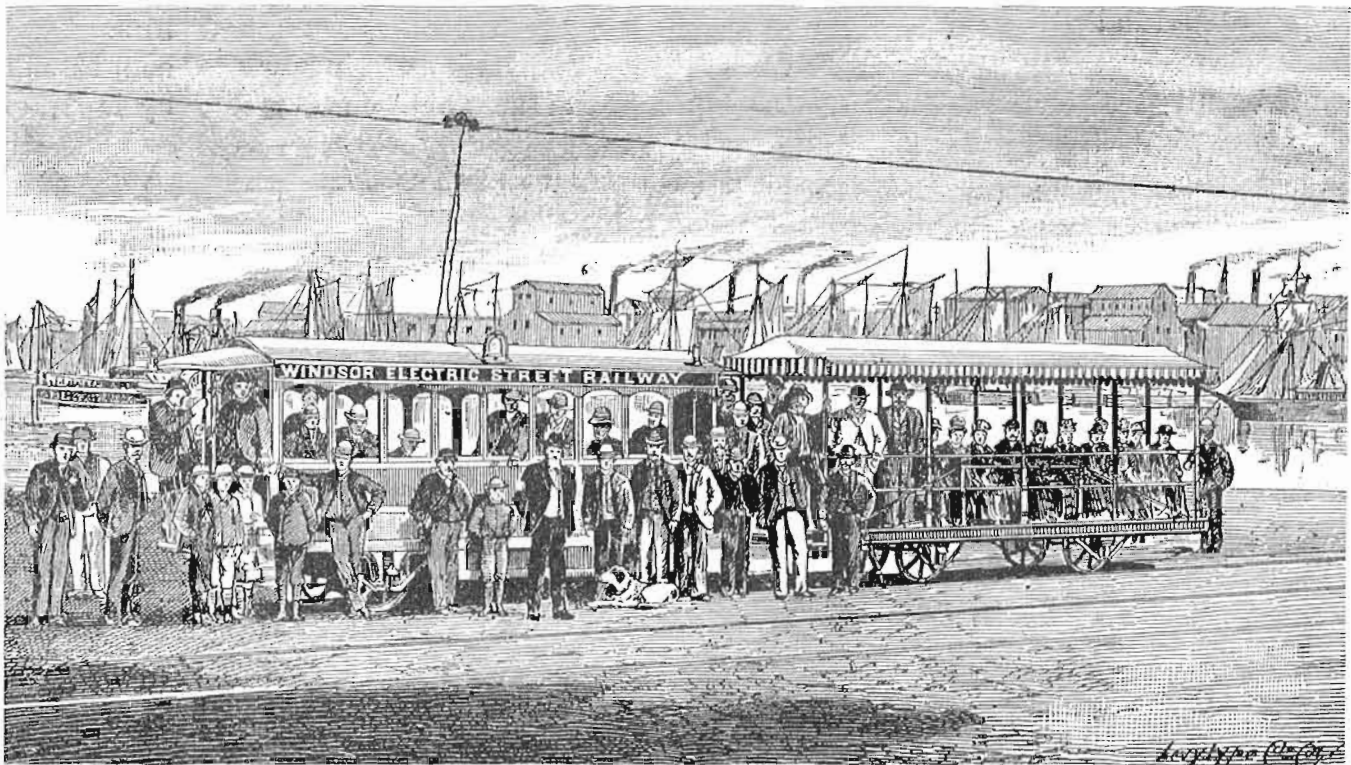
Walkerville electric railway station is receiving a coat of red paint. June 11, 1886.

The Windsor Electric Railway was formally opened Wednesday afternoon [June 9]. June 11, 1886.

The electric light company are putting in a new engine built expressly by Kane Bros. of Walkerville. This is done to meet the requirements of the electric railway so that power for the railway would not be wanting in case of the breaking down of the present engine. June 25, 1886.

On July 8 the Detroit and Windsor Electric Railway Company will begin the extension of their line to Brighton Beach when a very spirited competition may be expected with the Windsor and Sandwich horse car line. A rumour that negotiations are in progress looking to the purchase of the horse car line by the electric company is denied by the latter. July 2, 1886.

The Windsor electric car has a large bell, the resonant tones of which jar on the sensitive ear of the chief of police. Other people in Windsor also complain when the car rushes down the grade toward the British Queen [hotel] the bell sets up a clanging which discounts a locomotive. The police authorities here remonstrated with the manager of the road. Manager Tringham is in a quandary regarding what course to take in the matter. The related act requires the use of a bell, and inflicts a severe penalty if the law is not strictly complied with. July 23, 1886.



"Everybody and his pet dog was there". A fine example of "artistic license" by the illustrators of the magazine "Electrical World". The engraving at the top appeared in that magazine on October 2 1886, while the illustration above is the photograph from which the engraving was made. The cars and the people standing in front are accurately depicted, even including the dog. However the background is entirely different, the editor of "Electrical World" evidently preferring the riverfront to the city street scene shown in the actual photograph. Note that the "box" is gone from the car roof, and the car has been lettered.

NEXT PAGE: *"There is no doubt but that, in the near future, electricity will take the place of steam on all our railways". A most interesting and prophetic letter by Mr. Tringham exactly as published in the Amherstburg Echo, July 9, 1886. Unfortunately he died less than two months later, his ambitious plans unfulfilled.*

ESSEX ELECTRIC RAILWAY COMPANY

J.W. Tringham, the originator of the Electric Railway, in successful operation between Walkerville and Windsor, has issued on behalf of the Essex County Electric Railway Company, the following circular which is worthy of careful perusal and consideration of the people of South Essex:

Windsor, July 2nd, 1886.

GENTLEMEN, - The complete success of the Windsor Electric Railway, and the great convenience it is now to the residents and businessmen of the town, induces me to draw your attention to the fact that a system of Electric Railway lines along the leading roads throughout the county of Essex would be a great boon to the people and would supply, at a small cost, rapid and convenient means of communication which could not otherwise be obtained. The railways now in the country serve only the people living in the immediate vicinity of the stations on their lines, and the gravel roads are neither numerous enough, nor kept in sufficient repair, to supply rapid and convenient means of communication between the residences of the great majority of the ratepayers and the markets for their produce, or the sources from whence their supplies of all kinds not indigenous to the soil, are procured.

That the residents in the country districts of this county desire railways is well known to all of you, and I have no doubt that the most of you have for some time been desirous of maturing some scheme by which the wants of the people, in this direction, could be supplied at a cost commensurate with the means at your disposal. The evidence for this desire on your part has been seen in numerous applications for charters for steam railways and bonuses to assist in their construction. The fact that the ratepayers are always ready to grant large bonuses in addition to those granted by the government, shows that the people are no longer content with such means of communication as the ordinary county roads afford, but that they demand, even at very great cost, to be supplied with the means by which they can travel rapidly in all directions.

No one now doubts that "time is money", and the introduction of electricity as a motive power is most opportune. That cars can be rapidly and economically driven by electricity has been practically demonstrated, and it should be a source of gratification to all of the residents of Essex that within the borders of our county the first electrical railway of Canada, and of America, has been constructed and put into operation as a business enterprise, and that its success is so great that no other known means of transportation could now supply its place.

There is no doubt but that, in the near future, electricity will take the place of steam on all our railways, both on account of its economy and greater adaptability to the requirements of modern transportation.

Let the County of Essex, then, have the honour, not only of being the first in America in which there was sufficient enterprise to put electrical railways to a practical test, but be the first also to take advantage of the great benefits to be derived from the introduction of electrical railways throughout the county.

Steam railways are too costly to allow a sufficient number of lines to be built to serve the convenience or necessities of farmers living at a distance from and out of the direction of the general lines of through traffic, but electric railways, which can be built at small cost, and the cars on which are under such control that they can stop almost instantly, even when they have attained a speed of 25 miles an hour, and are admirably adapted to the wants of the people. The trains can not only stop at stations, but stop anywhere along the line and take on passengers and produce, and save the people long drives over bad roads to railway stations.

I would therefore respectfully request you to take into your serious condition the following proposal:-

That an electric railway be built from Windsor to Amherstburg; Amherstburg to Harrow and Kingsville to Ruthven and Leamington, and that a branch line be built from Kingsville to Essex Centre, and that, as the people's contribution to the enterprise, the various municipalities contribute at the rate of not less than \$1,000 per mile for the length of line in their jurisdiction, and that they grant the right of way along the roads, allow the Electrical Railway Co. to take such gravel for ballasting as can be got on these roads without impairing them, and exempt the lines from taxation for 20 years after their construction.

Should all, or a sufficient number of the municipalities interested, grant these concessions, the construction of the line would be commenced at once and rapidly pushed to completion. The railway would only occupy the side of the road as in Windsor, and would not impede the public travel, and care would be taken to protect the crossings and prevent accidents thereat. The rate of speed would be 20 miles an hour if desired, and as the line can be quickly built, a railway such as suggested herein can be put in practical operation at once, if the assistance asked for is obtained.

I might say that if any two municipalities connecting with each other, such as Kingsville and Essex Centre, Kingsville and Leamington, or Windsor and Amherstburg, granted these concessions, or as much as they might consent to, work could be commenced irrespective of the rest.

Hoping that the proposal may be acceptable to you, and that you may deem it in the interest of the people that the assistance asked for be granted.

I remain, gentlemen,
Your obedient servant,
J.W. Tringham.

2. The St. Catharines Merritton and Thorold Street Railway

The earliest Canadian electric street railway that kept operating as an electric line was the one at St. Catharines. It was electrified on the Van Depole system in 1887 and was converted to standard trolley operation in 1893. The article below appeared in the magazine "The Electrical Engineer" on October 18 1893, just before the conversion. It is interesting to see how the "high tech" marvel of 1887 was obsolete only six years later, much like computer technology today. The article was provided by the library at Woodstock Ontario which has an original copy of this publication in its holdings.



The Evolution of an Electric Road. St. Catharines, Canada.

By T.C. Martin

I.

The contrast between old and new methods is not often so strikingly presented as it can be found in electrical work, where changes are rapid and extreme. This fact was borne in upon me when, visiting Niagara Falls to inspect and describe the magnificent trolley road that borders the Canadian shore for twelve miles. I discovered that at St. Catharines, near by, the street railway was still being operated with pioneer Van



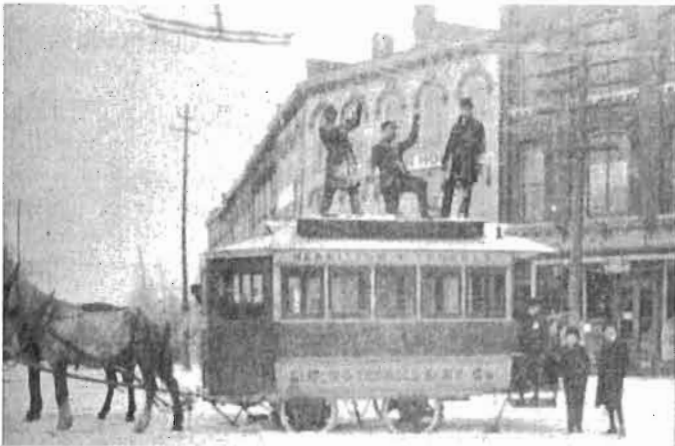
Depoele apparatus, and had overrunning trolleys on double overhead circuits, entirely independent of the track. Through the courtesy of Mr Frederic Nicholls, of the Canadian General Electric Co., I was enabled to visit the old road and to see it

just before the transition, with which he has been entrusted, is made to modern plant and methods. I brought away with me one of the antique trolleys as a relic, and have made it useful, for the last time, in employing it as an initial for this article.

It occurred to me then that some notes on the evolution of this road would prove of interest to the readers of this journal, and with the help of Mr. H.D. Symmes, one of the present proprietors, I am now able to submit a few details. I am also under obligations to Miss Annie Larkin, a charming young amateur photographer, for a beautiful set of views of the road and cars. Two of these photographs illustrate this article.

II.

It was in the winter of 1886-7 that Mr. C. A. Smith, as President and manager of the St. Catharines, Merritton and Thorold Street Railway, a horse road started in 1879, became convinced that the merits of electricity for traction, which a few of us were so insistent and enthusiastic about, must be looked into. But when he invited manufacturers to equip him for operating on the steep grades and short curves of his road, they did not hanker after the contract, and Hobson's choice was found in the Van Depoele Co., of Chicago. Those



A Cheerful Winter Scene

were days when Gen. Stiles and Mr. C.J. Van Depoele were begging for a chance anywhere to show what they could do, and they soon filled up Mr. Smith with their own high faith in electricity. The road was actually put in commercial operation electrically in the Fall of 1887.

At first the road was very successful and paid good dividends, but it fell on evil days, was allowed to run down, and would have passed out of existence, after a couple of auction sales of the property, had not a happy turn in its vicissitudinous career put it into the energetic hands of Messrs. Dawson & Symmes, the contractors for the Chignecto Ship Railway, who have since organized it anew as the Port Dalhousie, St. Catharines & Thorold Electric Street Railway. The present management impresses me as most energetic and intelligent, and likely to make a very brilliant success of the renovated and extended system.

The prime energy of the road has always been water, and the power house is situated at lock 12, on the original Welland Canal. A 500-volt generator of 100 h.p. with a 220-volt exciter, was put in; and I may note that the cost for this was \$4,000. Down almost to the present moment, the only safety device was a switch so arranged that the exciter might be short circuited in case of a short circuit on the main line. Such episodes were by no means infrequent, as it was a source of pleasure and instruction to the guileless local folk to drop crowbars across the two overhead wires. Another fund of amusement was derived from putting wire across, when the current was temporarily off, and watching the electrical illumination of the Province of Ontario when the current came on again.

The motors were fondly supposed by the builders to be of 20 and 25 h.p. respectively, but the difference, in actual operation, literally simmered down to a difference in the thickness of the field insulation. The speed of the motors was controlled both by a rheostat and by commutating the fields. Some of these old motors are still in use there. In the two fields on each motor are 15,000 feet of No. 11 B.&S. wire arranged to give eight steps of resistance; and in the armature are 48 sections of 75 feet each of the same size of wire as the fields.

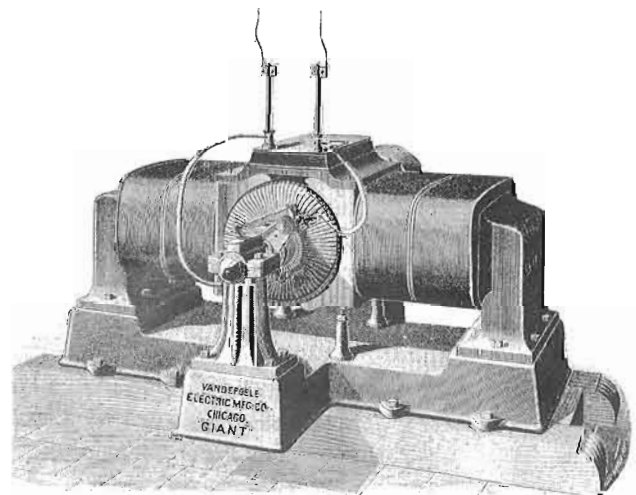
The brushes used are peculiar, consisting of two pieces of brass rivetted together, with a space left between the ends,

which are turned up to receive a piece of electric light carbon. As the copper was never scraped off the carbon, the noise made by the grinding on the commutator was anything but a song of the sirens.

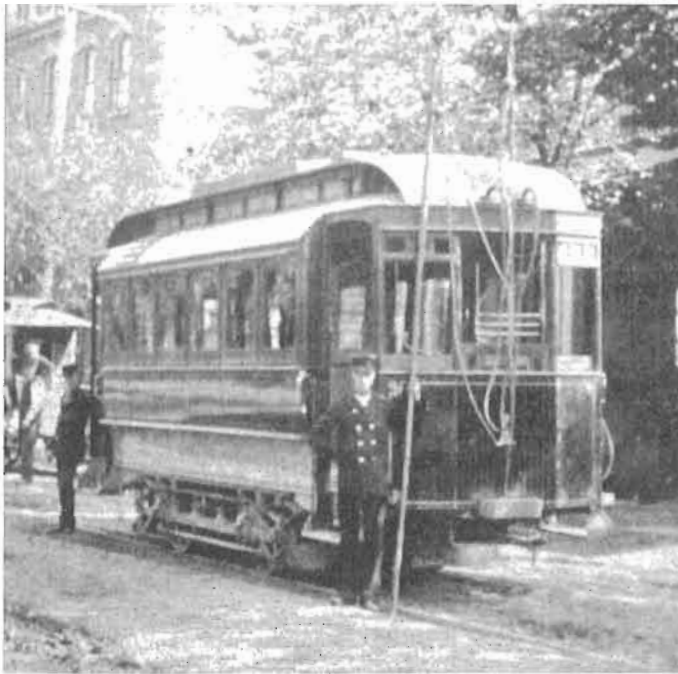
The motors were placed on the front of the car, and the wheels were put well forward, so that the weight of the car behind the front wheels would balance the weight of the motor. I remember once being induced by Mr. Van Depoele to jump up and down violently, with two or three other friends, on the rear platform of one of his cars of this type, to illustrate his statement that they would not tip. The motorman sat on the commutator side of his motor, in a neat little cab, and no one was allowed to speak to the man at the wheel unless that man undertook also the duties of conductor.

Turntables were provided at the ends of the line, as the cars then ran in one direction only. Mr. Symmes very neatly describes their motion, then running at 20 miles an hour with a light load, as resembling that of a snipe which haunts the Canadian frog ponds. The power from the motor to car axle was transmitted by a pinion driving a spur gear having at each end a sprocket wheel 10 inches in diameter. These sprockets were connected by chains with two 20-inch sprockets on the front axle. Probably Mr. Van Depoele experimented as much with improvements on the sprockets and links as he did on trolleys. When a section in the motor armature burned out or an open-circuit occurred, the section in trouble was nonchalantly cut out and the commutator bars were connected across with fine wire. Some of these cripples would run thus and stand up to their work for months, with 6 or 7 sections cut out. Mr. Symmes informs me that the first motor supplied was the best, and that it was in constant service until last March, when the car and its motor were both destroyed by fire.

During its earlier history, the road had four box and three open cars equipped with Van Depoele motors. It still has two Van Depoele motors on open cars, in active use, but the equipment has been increased by new rolling stock with Thomson-Houston "W.P.50" motors, and by a beautiful Canadian General Electric-Edison "32" generator, with the old Van Depoele as a reserve.



The Van Depoele generator in use at St. Catharines from 1887 to 1893.



Replacing a trolley on one of the cars built in 1893. These were the last to use the old system and were soon converted to the under-running trolley.

III.

The old-fashioned line equipment is not less interesting than the power apparatus, and the fact that it has been kept in use down to this time in spite of the awful difficulties of maintaining an overhead metallic circuit, speaks well for the pluck and skill of the pioneers. The trolley wire was drawn by the Roebings, and must be good, honest stuff, for after six years of use it shows little loss from its original three-tenths inch diameter, and the chief noticeable wear is at the sides, on the curves. Bracket and cross-suspension methods were employed. Insulation was not merely poor but primeval. Nothing but wood was used. For cross-suspension insulation, a piece of wood was turned round, grooved on one side, the wire placed in the groove, and a shutter or plug of wood to fit the groove placed on top of it. The ends were then bound with wire and the hangers were clamped around the wood.

It goes without saying that it was a hard task to get a trolley that would run on the wire and stay on. The early forms were always in a condition of uneasy and uncertain equilibrium, and when they came off and hit the top of the car with a clap of thunder, the passengers were ready to begin suit with the help of a wily lawyer, for heavy damages from electric shock. I believe one or two such suits were actually begun at Jamaica, L. I. The trolley shown at the beginning of this article was an "improvement" on the Van Depoele original and was invented by a local genius. It works well, as I can testify, but still has a groggy inclination to tumble over, and as it weighs 10 pounds, it can be readily imagined that a blow from it is serious. It is now installed in my office as a curiosity, and I notice that the charwoman rarely moves it. The weight is obviously a great drawback, and we all

know how lively was the sense of relief and gain when the reign of the under-running trolley began.

The wires to the trolley hang loosely, and the trolley trails along a few feet behind the car to which it is delivering current. Whenever the weary, wobbling device falls off, the conductor restores it to the line by means of an implement like a refined hay fork, which might also be utilized as an effectual weapon in those mythical districts where people are said to oppose the introduction of electricity. From the peculiar nature of the double overhead construction, and its effect on switches and turn outs, these forks are very frequently needed to handle the trolley.

I understand, however, from Mr. Symmes, that the change from the old order to the new, is about to begin, and that in adopting the under-running trolley with the single overhead circuit, he will use the discarded side as part of his earth return. Much of the detail apparatus must, however, be thrown away, and my respectful advice to the museum authorities in Canada is that they secure Mr. Symmes, scrap heap before the last traces of this early electric railway work in the Dominion are lost forever. I have no doubt Mr. Symmes will treat them as generously as he did me, when he allowed me to walk off with the trolley from a car on duty.

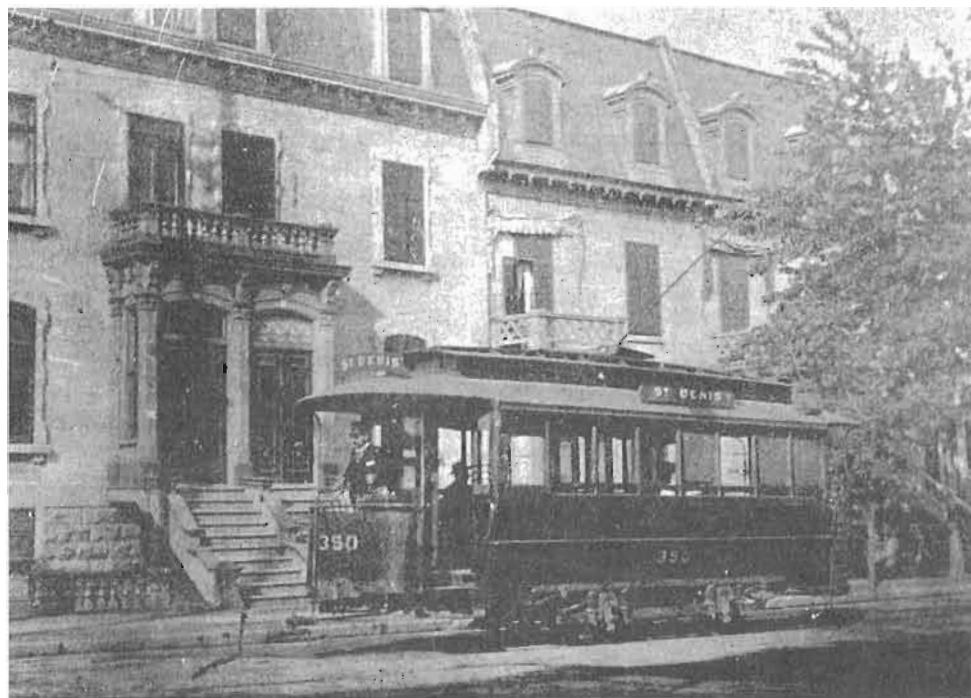
IV.

I have intimated that the road has entered upon a new lease of life, and it was gratifying to note that it has not only increased its power plant and rolling stock, but has built a very handsome new car barn and offices, of the most modern design, with a classic front and all possible conveniences for officers and men. In the machine shop, an old rewound Van Depoele motor drives the lathe and drill press, as well as the blower in the smithy. Three tracks run into the building, connected to the main line by three parallel curves, and under the tracks nearest the machine shop are two large pits lined with brick laid in hydraulic cement. The woodwork of the car barn is a pretty combination of cedar, chestnut and pine.

I should add that the barn is electrically lighted from a home-made storage battery, and will probably be heated electrically, as are the cars. The company has already 600 h.p. of water at command, and does not pay a king's ransom for it. The road is, I should say, the cheapest to run in all America, except where culm is available at about 25 cents a ton. In view of having so much cheap power, the company is installing a 1,000 - lamp lighting plant this fall. Negotiations are also going on with the Dominion Government for the purpose of securing the right of way over the Welland Canal bridges, and when this is secured, four miles will be added to the existing five or six, and eight more cars will be put in operation.

In justice to the vanishing system, it should be stated, in conclusion, that the view in which the motor, a team of horses, several men and numerous small boys are busy trying to get the car through the snow, was taken on the only day last winter when the road was blocked. It is pleasant to say a good word for an old friend at parting, and well to remember that but for the over-running trolley, the under-running might never have been.

3. Brownell's "Accelerator" street car



MONTREAL.—TRAMWAY ÉLECTRIQUE, vue prise à l'encoignure des rues St-Denis et Ontario. Pho. Laprès

A rare photo of "The Rocket" after it had become Montreal Street Railway No. 350. Le Monde Illustré, le 3 Novembre 1894.

On November 3, 1891 the Brownell Car Company of St. Louis Mo. received a patent for what it termed an "Accelerator" street car. Despite its name, the invention had nothing to do with the mechanical operation of the car; it did not involve some special motor or gearing with a higher rate of acceleration. It was simply a new arrangement of the entrance and exit doors which accelerated the loading and unloading of passengers.

From the very beginning, most closed street cars were in the form of a "box" body with a single sliding door in the bulkhead at each end. This door usually opened on to an open platform, but on some smaller cars, called "bobtails", there was merely a step between the door and the street. In later days, especially in cooler climates, the platforms were enclosed by vestibules which often had doors of their own, and after about 1910 the sliding bulkhead door, and sometimes the bulkhead itself, disappeared. This bulkhead door was a bottleneck for loading and unloading, since both boarding and alighting passengers would have to pass through the same narrow opening. The problem was worse on systems that prohibited the use of the front door, where the motorman stood. The usual arrangement was that one could get off by the front door but not board there.

Brownell's solution was simple, and it is surprising that no one thought of it before; have two doors, side by side, in each bulkhead. There was still a problem, of course; since the doors slid, only one could be used at a time. However the one on the right-hand side was the key; using this would speed up service and allow the front to be used as

an exit without bothering the motorman. Since most trams at this time were double-enders, the other two doors were used on the return trip.

During 1892 and 1893 Brownell undertook extensive advertising in street railway magazines and quite a number of "Accelerator" cars were sold. Only one is definitely known to have come to Canada, but this one became historic. In the summer of 1892 an "Accelerator" lettered "The Royal Electric Company of Montreal THE ROCKET" was delivered to the company named. Royal Electric had the contract to electrify Montreal's street railway, and on September 21 1892, "The Rocket" became the first electric car to operate in regular service in Montreal. In 1894 the car was sold to the Montreal Street Railway which numbered it 350, equipped it with a shorter

wheelbase truck, and included it in their regular roster. It served until 1914 when it was retired and preserved. Today it is in the Canadian Railway Museum. The interior still has the original decoration of 1892, including the builder's name and the all important "Nov. 3rd. 1891" patent date.

There were three reasons why Montreal never ordered any more "Accelerator" cars: They were more expensive than others, they were a bit too long for a single-truck car on Montreal's narrow streets, and they were more suited for double-end use while most of Montreal's cars were single-enders. Many cities used cars of their own design and did not want to pay royalties to Brownell, not to mention the customs duty importing these cars into Canada.

The "accelerator" idea was soon used by other companies, in various ways to avoid infringing Brownell's patent. On single-end cars one off-centre door would serve the purpose. Montreal's first "Pay-As-You-Enter" cars in 1905 had two doors, but one slid and one hinged, so both could be used at the same time; this was practical on these wide single-end cars. Brownell's patent expired in 1908 and it was clear for everyone to use the idea, but by then many other schemes were in use.

While one or two "Accelerator" type cars have been preserved in the United States, "The Rocket" is the least altered of the lot, retaining most of its original features except the truck. As such it is doubly historic, not only is it Montreal's first electric car, but it is also a representative of a design which helped to change the design of street cars worldwide.

AUGUST, 1892.

THE STREET RAILWAY JOURNAL.

109

BROWNELL'S ACCELERATOR

PATENTED NOVEMBER 3, 1891.



Twenty (20) men on Platform only six inches longer than usual, with exit for child through doorway and off platform not obstructed.

Put ten (10) men on platform with central door car and see how difficult it is for a man or woman to enter and leave car.

Do you want to carry all the passengers practicable on your cars?

OUR IMPROVED NON-OSCILLATING MOTOR TRUCK.

See how nearly level the car body is notwithstanding the large platform heavily loaded at one end, the front one being empty.

G. W. Hommel, of Milwaukee, in a recent letter says:

"On the Fourth of July
 "The Accelerator
 "carried on one half trip. i. e., from
 "Soldiers' Home to Third Street car house,
 "178 passengers (so registered by the conductor).
 "She carried the load with ease.
 "It is the finest car I have."

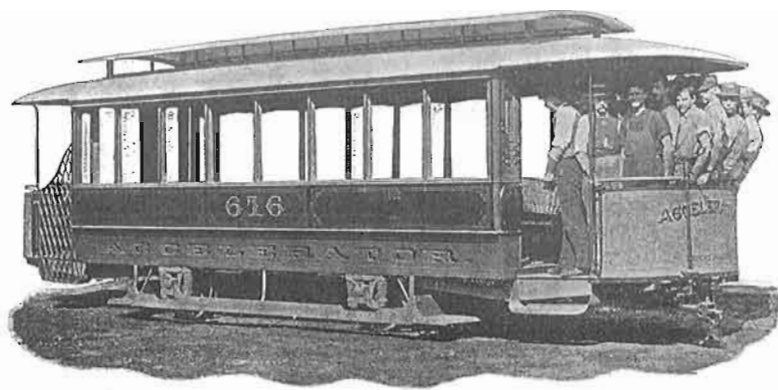
FOR PARTICULARS, ILLUSTRATIONS AND PRICES, ADDRESS

BROWNELL CAR CO.,

ST. LOUIS, MO.

See advertisements in "Street Railway Review" and "The Car."

ABOVE: A Brownell advertisement from the Street Railway Journal of August 1892. The car shown is "The Rocket", photographed just before it was shipped to Montreal.



That car has 29 men on the five-foot platform by actual count ; they weigh 4,551 lbs. by the scales ; and yet there is room for a woman with a baby in her arms, to go in or out of the door without touching one of them.

The door is at the corner.

It is called the "Accelerator." It accelerates getting there.

Passengers get on and off in one-quarter of the usual time when the car is crowded—two-thirds when not crowded.

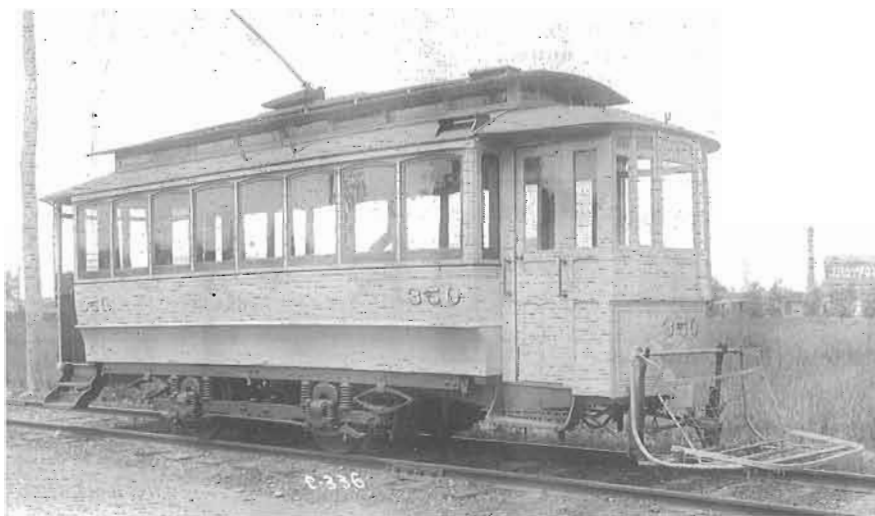
Saves perhaps five minutes a half-hour's trip—two or three more trips a day—say ten per cent. more money a day.

Costs nothing to speak of.

Accelerates dividends, don't it?

BROWNELL CAR COMPANY.

SAINT LOUIS, MISSOURI.



ABOVE AND OPPOSITE ABOVE: A two-page advertisement from the Street Railway Journal, May 1894. Woodstock Public Library

LEFT: "The Rocket" as it appeared in 1914, at the time it was taken out of service and preserved. MTC photo

OPPOSITE BOTTOM: "The Rocket" at the Canadian Railway Museum in 1965. Photo by Fred Angus

MORE ABOUT THE "ACCELERATOR" CAR.

(SEE OPPOSITE PAGE.)



The Conductor stands at the edge of the platform next the step, where he can see the whole inside of his car, where he can help his passengers on and off, where he is not surrounded by standing passengers, where he is free. His work is there when not inside collecting fares. It is the handiest place to do his work; therefore he stands there; therefore he does his duty more perfectly.

He occupies but little space, and leaves almost the whole platform for passengers. He is almost out of the way of passengers.

The corner of the platform between door and step is too small a space for a passenger; therefore nobody stands there; and the way in and out is kept clear automatically.

Platform passengers stand behind the Conductor, together, supported by one another when starting, stopping, turning curves, and at other strains. That is the handiest place for passengers; therefore they stand there. Everybody does what is handiest.

They sort themselves out, the get-outs-at-the-next-street outside; no shoving; no stepping in the mud to let another passenger off.

The platform is so comfortable, the tendency is to have it as big as it can be—four feet long is a good size for an electric car.

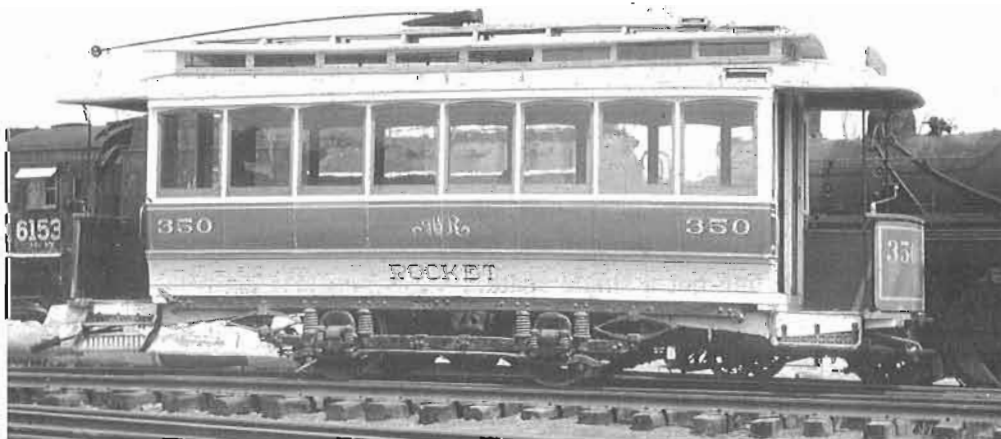
More passenger room, more passengers, more comfort, more satisfaction, more popular welcome, more reciprocal favors.

Adapted to roads where the traffic fluctuates, light sometimes, at other times crowds. A large platform is never inconvenient; at times it is extremely important. But a large platform is comparatively of little use without this door at the corner.

Our work is of the very highest order.

BROWNELL CAR COMPANY,

SAINT LOUIS, MISSOURI.





Two photos taken inside Montreal Street Railway car 350, "The Rocket", at the Canadian Railway Museum on September 21 2002, the 110th anniversary of the day the same car inaugurated electric tramway service in Montreal. The double door "Accelerator" feature, and the original 110 year old decals are plainly visible. The lower decal in the right hand photo reads "Patented Nov. 3rd 1891". The iron fittings on the sliding doors bear the cast inscription "Brownell and Wight", the older name for the car-building company.

Both photos by Fred Angus

4. An 1891 poem predicting the end of steam

The following poem was published in 1891. It compared the outdated steam locomotive of 1881 with the new electric units of 1891, and implied that electricity would soon conquer steam. This did indeed happen, but it took almost seventy years.

The Locomotive of 1881 - 1891

1881

Axles groaning, pistons hissing,
Tearing, wearing, bolts all missing,
Rushing hideous through the night air,
Always wanting some repair;
Boisterous, blustering, screaming, sooty
That's the way he does his duty.

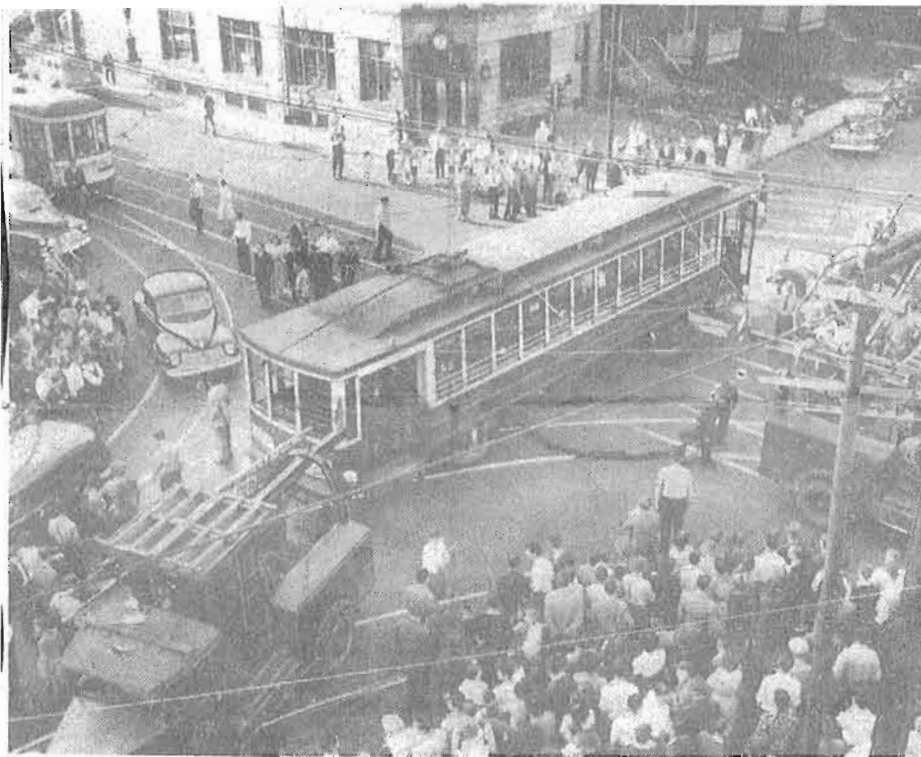
1891

Silent, voiceless, quickly speeding,
Coal or water never needing,
As he rushes through the dark,
Showing but a single spark;
Like glow-worm or fire-fly,
Or star twinkling in the sky,
Soundless all his work will be,
Moved by electricity!

The Street Car That Couldn't Make Up its Mind

JUNE 3, 1948

A Tram With More Than Just a One-Track Mind



This street car had trouble with directions. It came to a stop on Girouard avenue just south of Monkland avenue about 6:45 o'clock last night and when it started up again the trouble developed. The front wheels rolled northward on Girouard and the back truck turned west on Monkland. The back wheels then jumped the tracks, and the car swung around into this position, in an east-west direction on Monkland. Tram traffic was delayed nearly an hour until an emergency crew towed the disabled vehicle away. No one was injured.



Herald Copyright (Revised)

QUESTION OF ROUTE—Apparently the front and rear of this No. 83 tram got tired of the routine early last night. In any case the front end of the street car went north on Girouard ave. while the rear truck closed the switch and tried to go west on Monkland blvd. One truck was forced off the tracks and through traffic was delayed for nearly an hour, according to police. No one was hurt. Consts. Jean Paul Bragdon and Bernard Lalonde investigated.

While going through some old papers recently, your editor discovered these two newspaper articles that he had cut out back in 1948. It seems that in the afternoon rush hour of June 2 1948, a Montreal 1200-class street car (possibly 1246, but the number is very indistinct) was going north on Girouard at the corner of Monkland. At that time old cars like the 1200s were used only in rush hours. The front truck of the car continued north as it should have, but the rear truck turned west on Monkland. The result was that the tram ended up facing east on Monkland, a place where street cars never ran! The top article is from the *Montreal Daily Star* of June 3 1948, while the lower one is from the *Herald* of the same date.

The Adventures of a CPR Stock Certificate

by Fred Angus

These days stocks are very much in the news as share prices fall and fortunes are lost (and some even won) by speculators. Today most transactions are done by computer, and actual stock certificates are seldom issued. Before the days of instant worldwide communication, the stock certificate was a vital part of almost every trade in securities. This is the story of one such certificate, issued by the Canadian Pacific Railway Company exactly one hundred years ago.



On Christmas Eve, December 24 1902, the Canadian Pacific Railway Co. issued certificate Number B58409, printed in black with a bright green border and ornamentation, for one share of stock. It was duly signed by the Secretary and by E. Alexander representing President Shaughnessy. It was also signed by the transfer agent in New York and, two days later, was countersigned and registered by the Registrar in New York. It was issued to the financial brokerage firm of C. Schlesinger-Trier and Co. in Berlin Germany, and sent, with many other certificates, to Europe. There it was stamped in red with the German revenue stamp and placed in the vaults of the securities firm. At that time the share capital of the CPR was \$84,500,000 divided into 845,000 shares with a par value of \$100 each. The majority of this stock was held in Britain and Europe, so such international transactions were a daily occurrence.

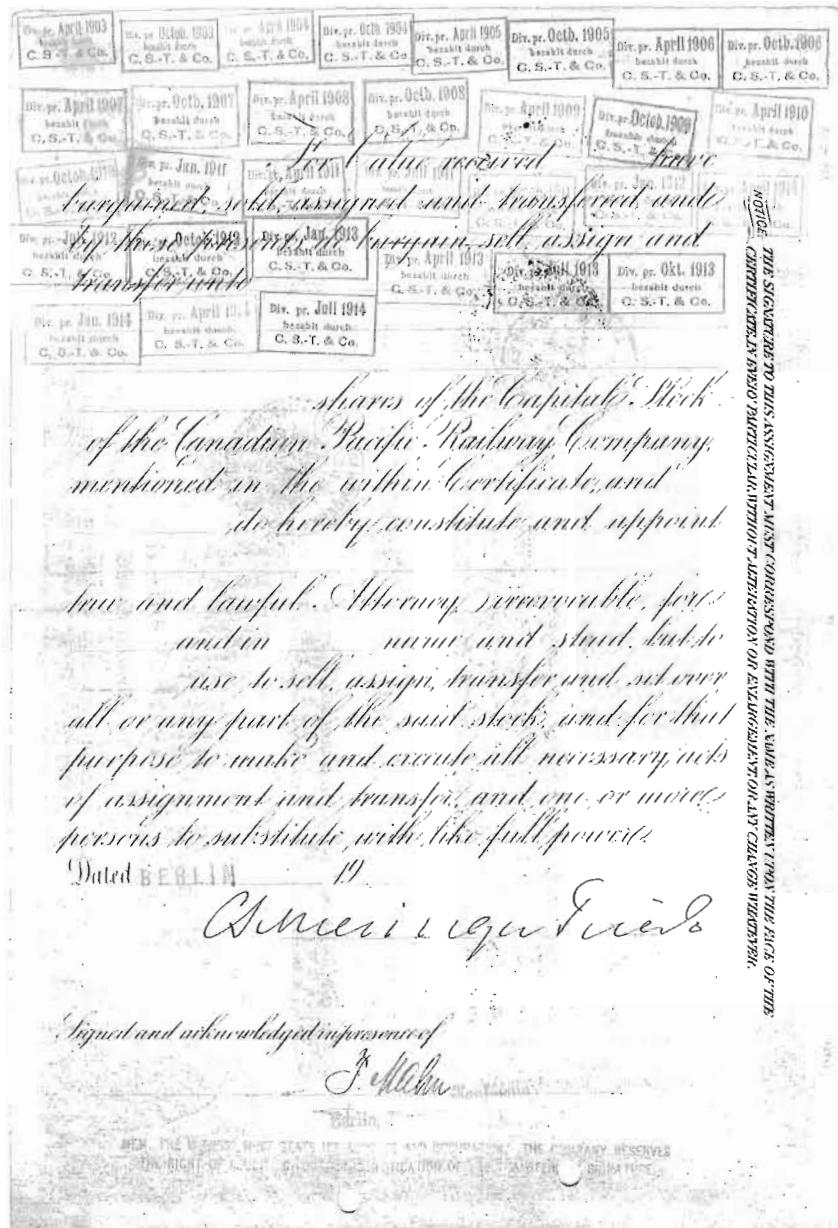
Soon thereafter the share represented by this certificate were sold to one of the broker's customers, and the certificate was endorsed and delivered. However a transfer of stock,

then as now, is required to be entered in the books of the issuing company (in this case the CPR), the old certificate turned in and destroyed, and a new one issued. If this was not done, any dividends would continue to be sent to the broker instead of the new owner. The problem was that to return the certificate to Montreal or New York, cancel it, change the registration, issue a new certificate and return it to Germany would be a lengthy process, taking about three weeks including both transatlantic trips. The broker solved this problem by leaving the certificate as is and paying any dividends on that stock to the new owner.

So it was that each dividend on this share continued to be sent by the CPR to C. Schlesinger-Trier and Co. They would advise the owner who would bring in the certificate and receive the dividend. The certificate would then be stamped on the back with the dividend and date to show that it had indeed been paid. As far as the CPR was concerned, the stock was still owned by CST&Co., and the same certificate remained outstanding.

**DIVIDENDS ON CPR STOCK
1903 TO 1914**

DIVIDEND	DATE	AMOUNT
42	Apr 1 1903	3.00
43	Oct 1 1903	3.00
44	Apr 2 1904	3.00
45	Oct 1 1904	3.00
46	Apr 1 1905	3.00
47	Oct 2 1905	3.00
48	Apr 2 1906	3.00
49	Oct 1 1906	3.00
50	Apr 2 1907	3.50
51	Sep 30 1907	3.50
52	Mar 31 1908	3.50
53	Sep 30 1908	3.50
54	Mar 31 1909	3.50
55	Sep 30 1909	3.50
56	Mar 31 1910	3.50
57	Sep 30 1910	3.50
58	Dec 31 1910	2.00
59	Apr 1 1911	2.50
60	Jun 30 1911	2.50
61	Sep 30 1911	2.50
62	Jan 2 1912	2.50
63	Apr 1 1912	2.50
64	Jun 29 1912	2.50
65	Oct 1 1912	2.50
66	Jan 2 1913	2.50
67	Apr 1 1913	2.50
68	Jun 30 1913	2.50
69	Oct 1 1913	2.50
70	Jan 2 1914	2.50
71	Apr 1 1914	2.50
72	Jun 30 1914	2.50



The reverse side of the certificate showing the record of the 31 dividends stamped in red. Note that it has been endorsed by CST&Co. making it transferrable to bearer should the new owner decide to register it.

During the next twelve years, 31 dividends were paid, totaling \$88.50 on a share with a par value of \$100. In addition, on seven occasions between 1904 and 1914, the CPR issued rights, which were options to purchase new shares at a price lower than market value. Each time this happened, certificate B58409 was duly stamped on the front, so the notices of rights were on the front, and the record of dividend payments neatly on the back. All these stamps were in red ink. This certificate bears the stamps for all CPR dividends from No. 42 (\$2.50 paid on April 1 1903) to No. 72 (\$2.50 paid on June 30 1914).

The last dividend stamp is dated July 1914, representing the dividend paid on June 30. Early in August the Great War broke out and all transactions between Canada and Germany ceased. There is no record as to where this CPR certificate was during these grim years, but it probably remained in a vault in Berlin. Certainly the CPR did not send any dividends to Germany during this time.

The next we hear of our certificate is in 1921 when it was stamped in black with a circular stamp reading "Valeurs

Mobilières Etrangères, Contre Timbre Alsace et Lorraine 1921". Evidently this had to do with the French seizing enemy securities in Alsace and Lorraine, which had been returned to France by the peace treaty of 1919. After that there is no further record, and the CPR wrote off certificate B58409 and issued a new one to represent this share.

Where this certificate was for the next sixty-five years is anyone's guess. It was never cancelled, it survived World War II, and finally surfaced in 1986. If it had not been written off it would now represent 40 shares, due to three splits of CPR stock. Even with the recent downturn in share prices, this would represent well over two thousands dollars. However certificate B58409 is not redeemable since it has been written off CP's books. It is, however, an interesting relic with a fascinating story to tell.

The CBC 50th Anniversary Train



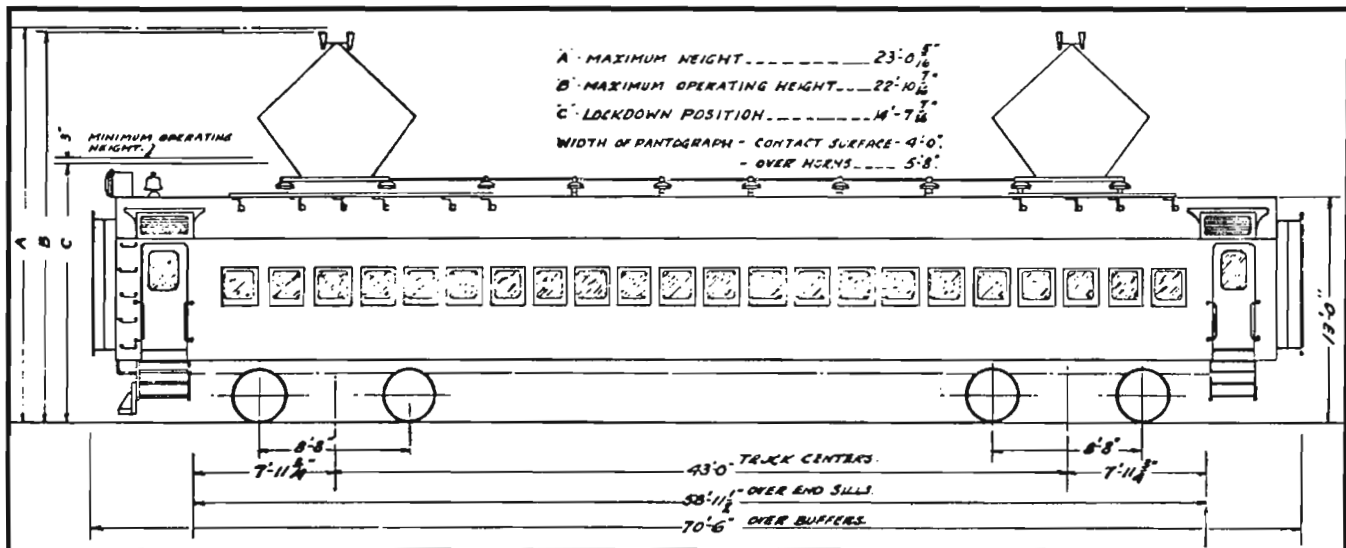
On September 6, 1952 the Canadian Broadcasting Corporation inaugurated television broadcasting in Canada. This was not the first Canadian telecast, for there had been experimental stations as early as 1932. In addition, Canadians living near the United States border could pick up American television broadcasts. However 1952 marked the start of CBC television, and the first broadcasts accessible to the majority of Canadians.

To commemorate the 50th anniversary of this historic event the CBC ran a special train across Canada during 2002. Locomotive 6403 was specially painted for the occasion, and it hauled a train of stainless steel cars which included a baggage car fitted up as a museum display relating to CBC history. In central Canada the train also included a display of the new "Renaissance" cars recently placed in service.

These two photos show the CBC train on September 27, 2002, during its visit to Montreal. It was exhibited in the Old Port area, and the dome of Bonsecours Market is visible behind the train.

Photos by Fred Angus

50th Anniversary of the CNR Multiple Unit Cars



This year marks the 50th anniversary of the introduction, by the CNR, of its multiple-unit cars to the Mount Royal tunnel commuter line. The eighteen cars (motors M-1 to M-6, and trailers T-1 to T-18) were ordered in 1950 to replace conventional trains as well as the few older MU cars then in service. Originally the motor cars had been planned to be numbered 15905 to 15910, while the trailers were to have been 15975 to 15986. However before they were completed the numbers were changed as above. On June 9, 1952 the first of the series, M-1, was delivered and underwent tests. The other 17 cars followed during the summer, and on September 23 all were placed in service.

Although the cars had been tested, these tests were run in the summer. As winter approached, there were problems with blowing snow getting into the motors. As a result, during the winter of 1952-53 the new cars were operated as trailers hauled by electric locomotives until the trouble was corrected. (A similar problem occurred in 1995 with the cars that replaced the MUs. History repeats itself!).

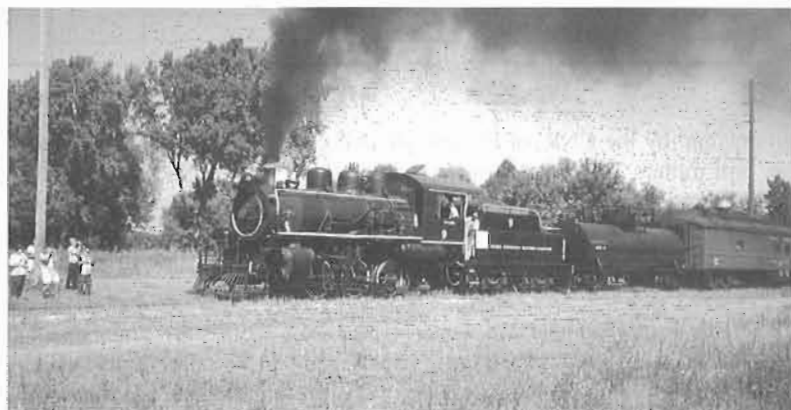
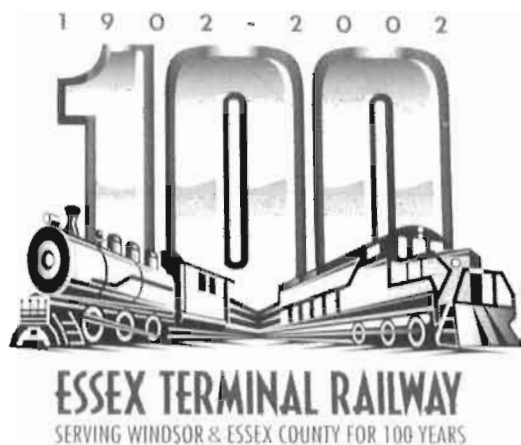
The MUs had a long career in commuter service, most surviving until 1995, a total of 43 years. Of the original 18, at least 14 have been preserved in locations as far distant as Alberta and South Carolina. This is a survival rate of more than 77%.

The following article appeared in CRHA News Report (predecessor of Canadian Rail) No. 28, September-October 1952, exactly fifty years ago.

On September 23rd, Canadian National Railways multiple-unit cars M-1 to M-6 and T-1 to T-12 (latter are trailing units) were placed in regular service in the Montreal Terminals electrified zone. These cars were built by Canadian Car & Foundry in Montreal and they were received in June, though introduction to regular service was delayed due to the fact that pantograph power collectors were not available until recently. Commencing with the change of timetable on September 28th the cars will take over 20 daily weekday round trips between Montreal and Ste. Eustache, Cartierville and Montreal Nord, on which regular equipment has hitherto been utilized. Cars are operated in electrical units of three, one motor and two trailers. In practice, three trains of six cars (two such units) will be used, though in the first week of operation, one train was increased to nine cars, at the expense of another during the lighter traffic period which used three cars only. The cars are tastefully finished in light green pastel interiors with maroon upholstery. While seats are closely spaced for the suburban service, the cars have wide aisles. The motor cars seat 88, in 22 seats

corresponding to 22 windows on each side. Toilet and drinking water facilities are provided only in the trailing cars which seat 84 passengers. Car interiors are separated from the vestibules by sliding doors. Platform controls are installed at one end of each car in the motors and trailers and there is a door arrangement which can be closed over the controls or opened to provide a separating partition between the engineman and the rest of the platform. The cars are quick accelerating and the exterior is painted in standard CNR green. Like all CNR unit cars, control ends are painted orange with red corridor doors. Pantographs are painted red. When the air horn is sounded, horn units on all motor cars in the train are operated in either direction, with a consequent increase in volume and carrying ability of whistle signals. These cars can be heard for several miles and they are noticeably louder than the electric locomotive whistles. In building and purchasing these multiple-unit cars, the National system has taken a laudable and progressive step forward in a field which many railroads consider "Excess baggage" to be done away with, where possible.

Essex Terminal Railway's 100th Anniversary



The Essex Terminal Railway runs due south from Windsor, Ontario to Amherstburg. It serves a number of industries in the area and carries a great deal of freight. It has never had passenger service but was intended from the first as a freight hauler in this very industrialized part of Ontario.

The ETR was incorporated in 1902 by Act of the Dominion Parliament, 2 Edward VII, Cap. 62. its purpose was "To build from Walkerville via Windsor and Sandwich to Amherstburg". The main line was completed in 1907. The ETR was controlled by the United States Steel Corporation until 1937 when it was sold to Dominion Steel and Coal.

The first week of September 2002, the ETR celebrated 100 years of existence by running a series of short steam excursions, using former ETR steam locomotive No. 9, and giving a very rare opportunity to ride this short line. No. 9 was built in 1923 and is today in the railway museum at St. Thomas. On August 31 it was brought to Windsor.

The week of celebrations culminated on September 7 with a round-trip steam trip over the entire line from Windsor to Amherstburg. These photos were taken by your editor on that day. Number 9 then returned to St. Thomas where it is used in tourist train service.

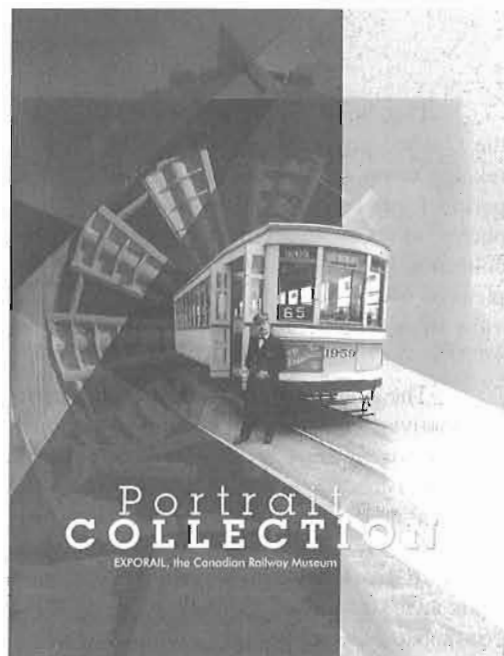
News From the Canadian Railway Museum

On September 28 2002 the Canadian Railway Museum unveiled its latest publication. Entitled Portrait of the Collection, the book is available in either English or French editions.

Written by Jean-Paul Viaud, with input from other CRHA members, this book is more than a guide to the collection. It is a capsule history of Canadian railways as illustrated by items in the collection. The research is excellent as is the artwork. Some of the latter is quite striking, especially the cover that looks as if the rotary snow plough is about to chomp up street car 1959!

On the right we see the cover of the English version of the book, while below is a photo taken beside car "Malahat" at the time of the ceremony.

Work has now resumed on the new "Exporail" building and it is expected to be completed in time for opening next year. The bottom photo shows the entranceway of the building as it appeared on September 21, 2002.

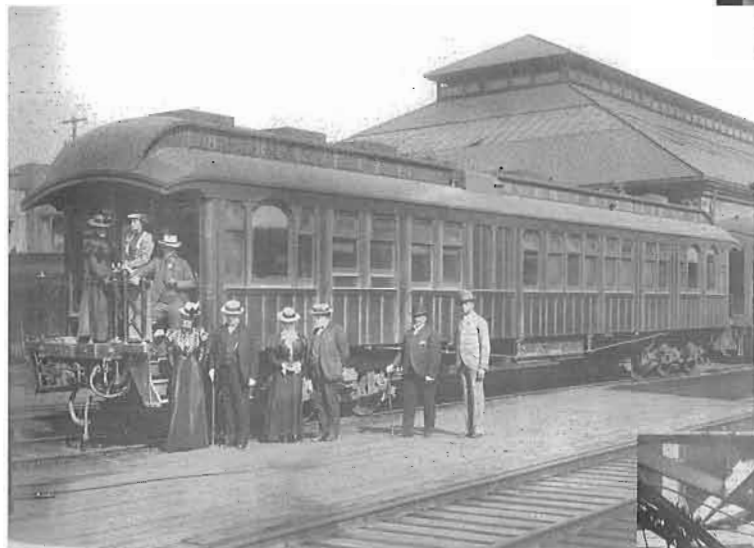


Au Rythme du Train 1859 - 1970

by Alexander Reford

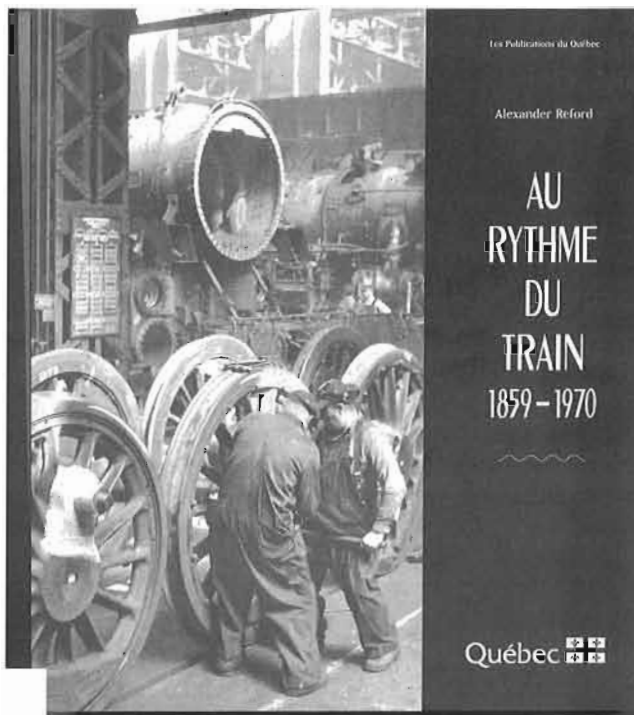
This book, by Alexander Reford and published by the Quebec government, is a picture book of rare photos relating to railways in the province of Quebec, covering the period from 1859 to 1970. Included are 156 high quality photos, of which 45 are from before 1900. The earliest in the collection is of locomotive "Trevithick" of the Grand Trunk pictured when new in 1859. Latest in the series is an interior view of one of CP Rail's double-decker commuter cars in 1970.

The book is divided into eight sections, including locomotives, construction, accidents, stations, freight trains etc. Electric railways are not forgotten; for instance there is a photo of the first electric car to run in Quebec City (1897) as well as no less than four views of the interior of the Montreal Street Railway's power house in 1894. Of interest to members of the CRHA is the photo on page 39 (see below). It is no less than an extremely rare side view of CPR official car "Saskatchewan" at Windsor station in 1897. This is before the car was rebuilt in 1901. Even porter Jimmy French appears, as well as a figure who is very likely Sir William Van Horne, to whom this car was assigned.



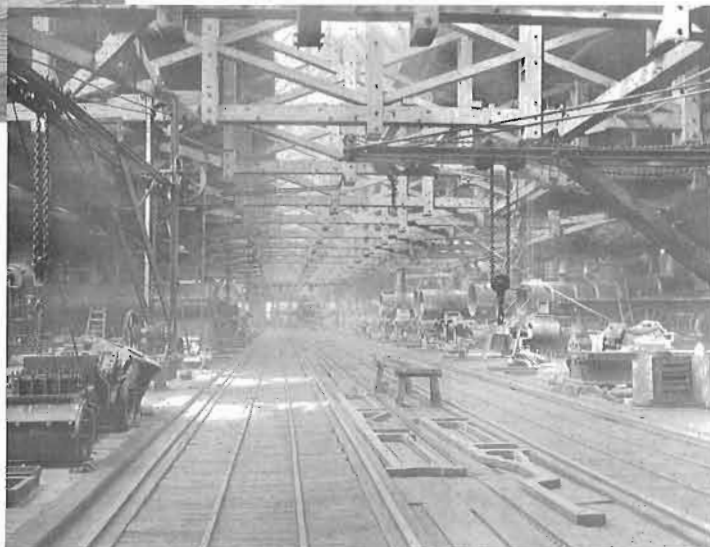
The introductory text and captions are in French, however a full English translation of all the captions is given at the back which will be of great help to those who are not fluent in the language of Moliere!

The only serious criticism your editor could find is that a few of the dates given are quite inaccurate. For example the 1897 Quebec street car mentioned above is shown as "circa 1910". While thirteen years is not much in some histories, in electric railway history it is considerable. Another example is the Vice Regal train shown on page 32. It is labeled "circa 1915", yet the locomotive and cars show that it is clearly of the 1870s. Also the above-mentioned view of car "Saskatchewan"

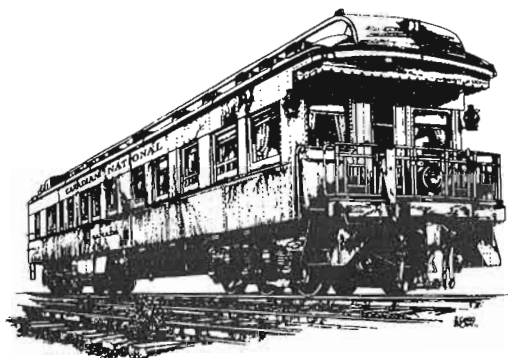


(lettered Canadian Pacific) is described as a Pullman car. In fairness to the author, most of the errors are due to inaccurate cataloguing by the archives where the photos are held; often those who catalogued them took "educated guesses".

These errors do not detract from the basic importance of the book; that of being a collection of rare and highly desirable photos of Quebec railways covering a period of one hundred and eleven years. It should be in the library of anyone who is truly interested in the history of Canadian railways.



The Business Car



BOMBARDIER UNVEILS JETTRAIN TECHNOLOGY

Washington, DC, October 15, 2002 - Bombardier Transportation today unveiled at Union Station in Washington DC, the first 150-mile per hour (240 km/h) non-electric high-speed rail locomotive designed for the North American market. The state-of-the-art Bombardier "JetTrain" locomotive is powered by a jet engine derived from a Pratt & Whitney PW 150, which replaces the traditional diesel engine found in most current rail equipment.

JetTrain technology was designed to offer the speed and acceleration of electric trains without the cost of building electrified rail lines. It meets all North American standards for high-speed rail. The initiative was launched in 1998 as a public-private development partnership between Bombardier Transportation and the Federal Railroad Administration (FRA).

"Bombardier has moved the goal posts," said Pierre Lortie, President and Chief Operating Officer of Bombardier Transportation. "JetTrain high-speed rail is game-changing technology that breaks open the high-speed market throughout North America."

Among its many performance features, the locomotive is 20 per cent lighter than a conventional diesel unit with twice the acceleration. It has already undergone extensive low and high-speed dynamic testing as part of the Bombardier/FRA Research & Development program.

JetTrain is significantly more environmentally friendly than other forms of mass transportation. Under operating conditions, JetTrain greenhouse gas emissions will be at least 30 per cent lower than from a conventional diesel. As well, the JetTrain locomotive is quieter than FRA noise standards at all operating speeds.

JetTrain is the only non-electric high-speed rail technology designed to meet Tier II Passenger Equipment Safety Standards established by the FRA. Tier II standards specify minimum safety requirements related to crash energy

management, rollover strength, and the ability to withstand compressive forces at speeds greater than 125 mph (200 km/h).

Market experience in Europe and now in the Northeast Corridor has consistently demonstrated that high-speed rail is an attractive and competitive alternative to both air and automobile travel for trips of 150 to 400 miles (240 to 640 km).

Bombardier Transportation manufactures 20 different intercity and high-speed products, including seven different high-speed locomotives. Bombardier has participated in the development of many of the world's leading high-speed rail systems, including four different TGVs, the ICE trains used in Germany and the Netherlands, Italy's ETR 500, China's Xinshisu, Spain's Talgo and America's Acela.

Bombardier Transportation is the global leader in the rail equipment manufacturing and servicing industry. Its wide range of products includes passenger rail cars and total transit systems. It also manufactures locomotives, freight cars, propulsion & controls and provides rail control solutions.

Bombardier Inc., a diversified manufacturing and services company, is a world-leading manufacturer of business jets, regional aircraft, rail transportation equipment and motorized recreational products. It also provides financial services and asset management in business areas aligned with its core expertise. Headquartered in Montréal, Canada, the Corporation has a workforce of some 80,000 people in 24 countries throughout the Americas, Europe and Asia-Pacific. Its revenues for the fiscal year ended Jan. 31, 2002 stood at \$21.6 billion Cdn. Bombardier trades on the Toronto, Brussels and Frankfurt stock exchanges (BBD, BOM and BBDd.F). For more information see Bombardier's web site: <http://www.transportation.bombardier.com>

ONTARIO NORTHLAND CELEBRATES 100TH ANNIVERSARY

In 1902, by act of the Dominion Parliament (2 Edw. VIII Cap. 9) the Temiskaming and Northern Ontario Railway was incorporated. A project of the Ontario government, the T&NO was planned and built to open up regions of Northern Ontario, and in this it has served admirably well for a century. Such events as the great mining boom at Cobalt in 1910 or the Porcupine gold strikes would not have happened without the T&NO. By 1930 the railway had reached from North Bay to Moosonee, its present terminus. In 1946 its name was changed to Ontario Northland, and it adopted the slogan "Ontario's Development Road". We hope to have a feature article on the ONR early next year.

BACK COVER TOP: CN's "Cabot" from Montreal to Sydney N.S. via the former National Transcontinental line, stops at Truro N.S. on October 5, 1968. On the rear is a "Skyview" car acquired from the Milwaukee Road.

BACK COVER BOTTOM: One of the CPR's "Park" dome observation cars brings up the rear of CP's Montreal-Quebec City train at Trois Rivières on April 9, 1967.
Both photos by Fred Angus

Canadian Rail

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