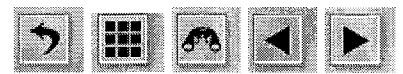


THE  
CANADA DIVISION  
OF THE  
MICHIGAN CENTRAL  
RAILWAY

C. H. RIFF

2013



**Photo Number:** MAT002356

**Photographer:** unknown

**Location:** St. Thomas, ON

**Railway Name:** NEW YORK CENTRAL RAILROAD

**Date:** 1940-10-20

**Caption:** Train #45 (4-6-4) crossing the Kettle Creek bridge at St. Thomas.

**Subject:** Steam locomotiveTrain, passengerBridge

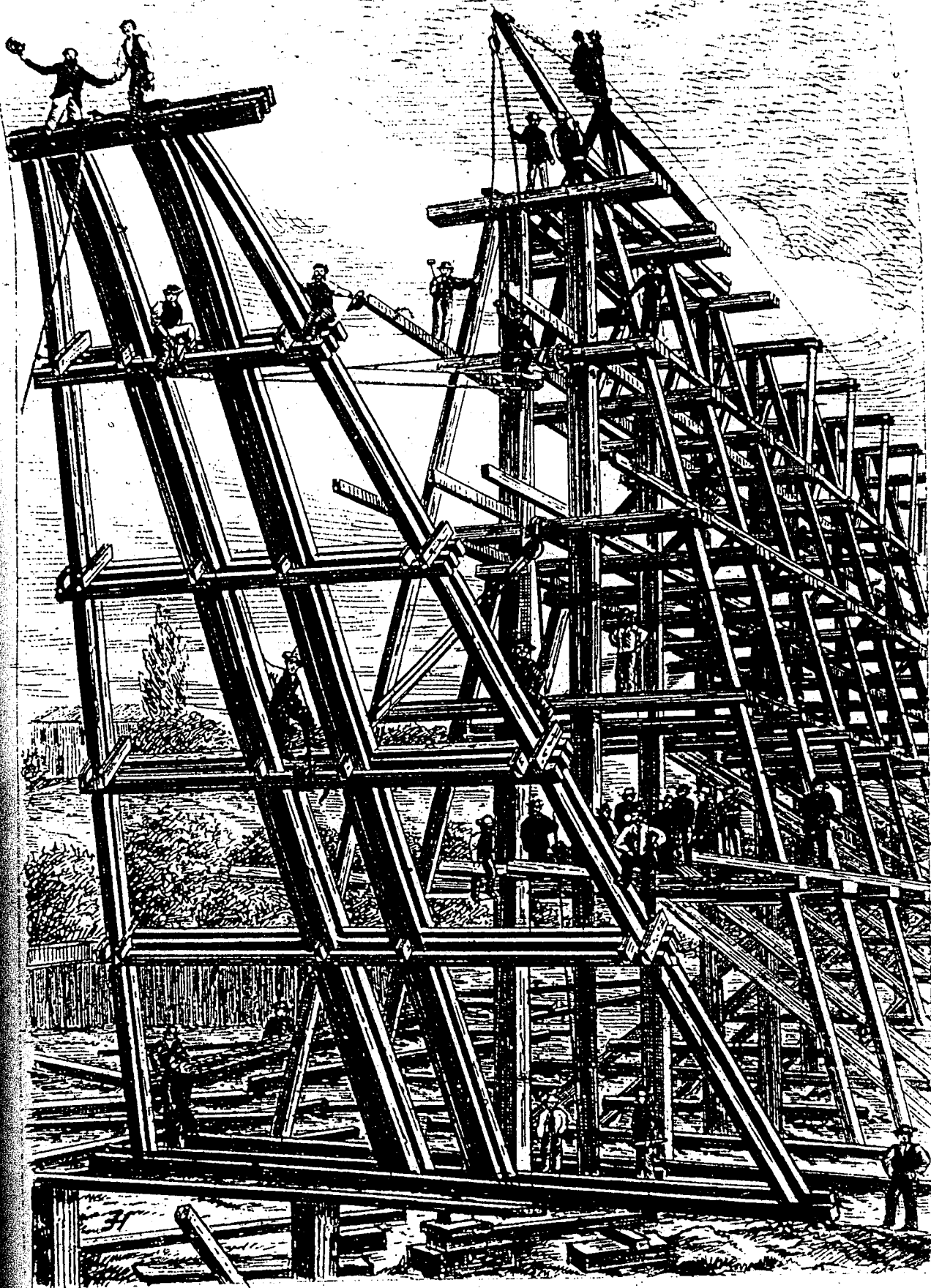
**Collection:** Mattingly



MICHIGAN CENTRAL

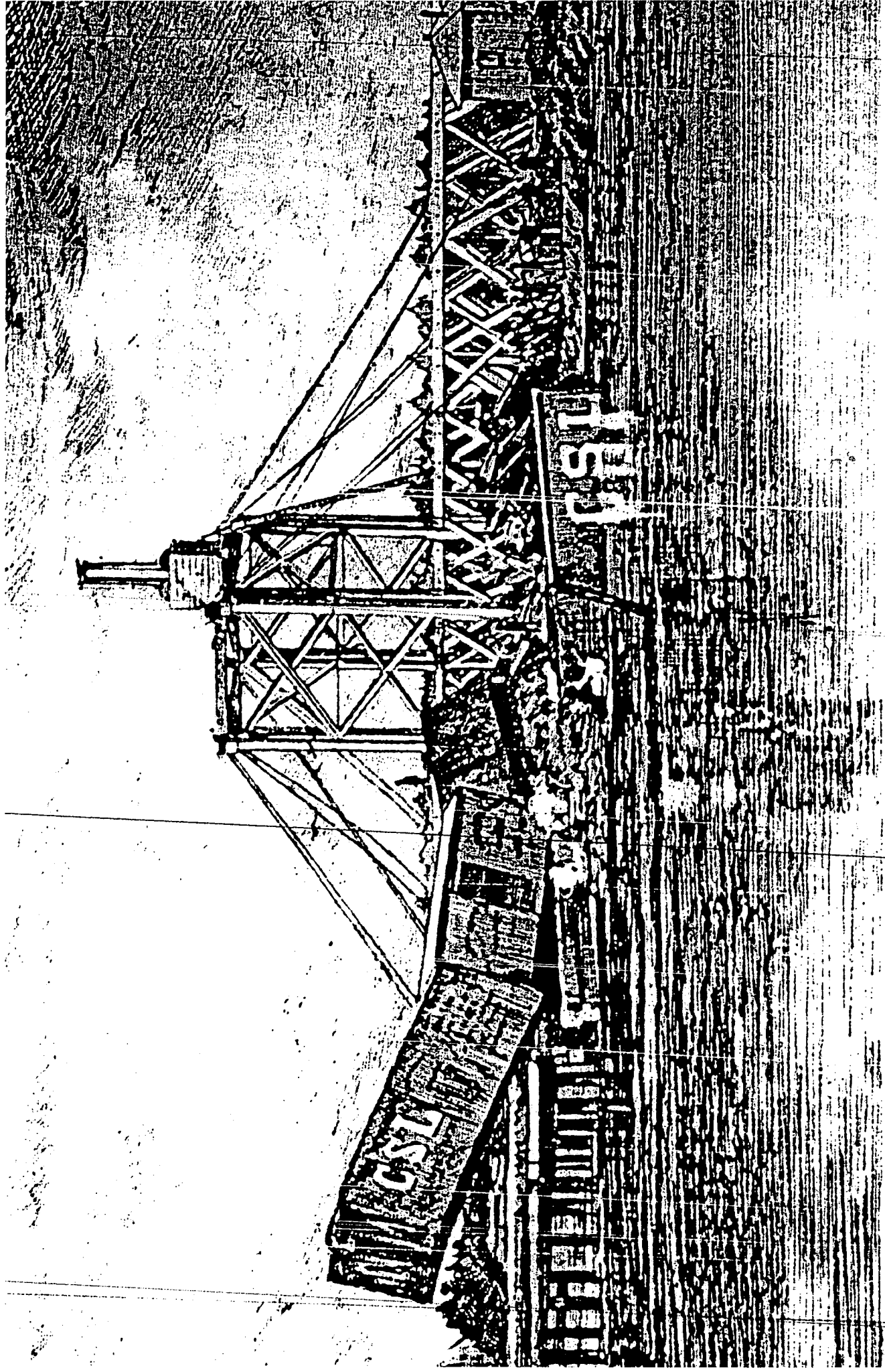
CANADA SOUTHERN

C. H. RIFF



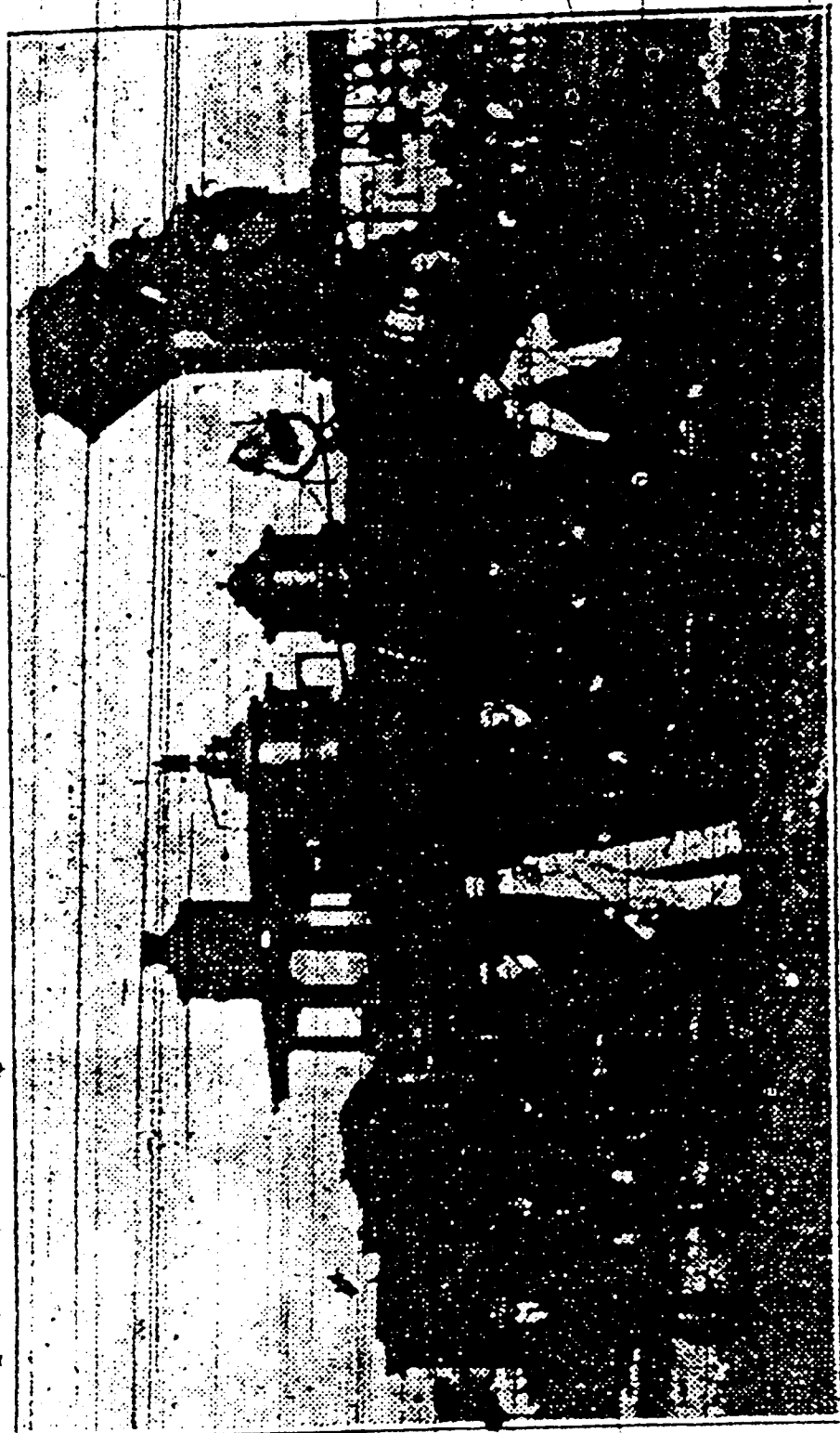
SECTION OF THE CANADA SOUTHERN RAILWAY BRIDGE AT ST. THOMAS, ONT. A

SEE PAGE 402.



Welland, 1876: Human negligence caused this accident and the death of the driver of the locomotive, who had ignored a red stoplight. But perhaps he had not known that this swing bridge, which was always left open to facilitate growing canal traffic. The locomotive (o

## A CONTENTED GROUP OF F.M.C.R. OLD-TIMERS



ONE of the most popular locomotives of the old days was No. 344, shown above. And don't think they couldn't travel, even if they were about half the size of the present huge sport model variety. They didn't haul as much tonnage but they made the time, when the veteran pilots opened the throttle wide. In the above photograph are some engineers and other employees who were working here about 50 years ago at the M.C.R. Reading from right to left they are: C. Kennedy, Ned Glowry, Tim Hickey, T. Baird, W. Webb, W. Harris, L. Learn, J. Ostrander, R. Murray and I. Kinsman.

9/5  
1931

October 30, 1871        The contractors made a tour of inspection on the grading of fifteen miles of the right of way starting at Waterford. The grading on Mr Canty's contract, from Townsend Centre to the townline of Walpole was nearly completed. Mr Hawkins had three miles finished east in the township of Walpole. The entire grading Walpole was completed with the exception of the Nanticoke pond. The bridge work between St Thomas and Welland was nearly completed. One hundred men were at work on the big wooden trestle at St Thomas, and that the two big trestles at Otter Creek and Big Creek had been completed.

November 8, 1871        The bridges had been completed and nearly two hundred miles of the route had been graded. The company was waiting for the delivery of the sixty pound steel rails from England in the spring. The railroad took delivery at Fort Erie of its first two engines from the Baldwin Locomotive Works.

November 23, 1871        Another pair of locomotives for the Canada Southern Railway reached London and were placed upon the tracks and taken to St Thomas to push the construction forward.

May 9, 1872              The Canada Southern Railway Company had commenced building their workshops on their land on the east side of St Thomas. Labourers, stone masons, bricklayers and carpenters were in great demand.

August 27, 1872        On Saturday, the first train, consisting of engine, tender and passenger coach was run on the Canada Southern Railway. The coach was occupied by Mr Milton Cartwright, President; Mr W. A. Thompson, and several Directors, and a number of gentlemen from New York. A distance of fourteen miles was travelled.

October 5, 1872        The tracks of the Canada Southern Railway had been laid from Amherstburg as far east as West Tilbury. A station has been laid out at Comber. John Fletcher granted the company seventeen acres of land, free of expense, for a station on the town line, between Raleigh and East Tilbury.

## THE ERIE RAILWAY WAR

April 1872, that old thorn, the Erie and Ontario Railway Company would annoy the company once again. Running from one of the only ice free ports on Lake Ontario, Niagara on the Lake to Chippewa and Fort Erie it had some use to the Great Western, but it had more use for the Canada Southern. In the early morning at three o'clock April 20th, 1872 the Erie and Ontario Railway Company, with the aid of Canada Southern employees made an attempt to recover possession of their railway from the Great Western. A party took a GWR train and ran it north from Fort Erie, stopping at the stations and locking them up. Reaching Clifton, the junction with the GWR at Niagara Falls their train stopped and they started to pull up the connection between the E&O and the GWR. They were interrupted by a posse of Great western employees who chased them off, replaced the connection and took their train back up the line unlocking the stations all the way back to Fort Erie.

Two days later a second attempt was made by the Canada Southern to take possession, again relocking the stations and this time they opened and locked the Chippewa swing bridge open. They over turned a GWR freight car at the junction and seized the Niagara station. The GWR again sent a train from Fort Erie recovering the stations but at Niagara the gang would not surrender the station to the GWR boys. The Canada Southern was left in possession. A legal battle followed in the courts.

November 13, 1872      The Canada Southern Railway Company ran their first train as far as Welland.

May 20, 1873              The western division of the Canada Southern Railway was opened for local traffic today. The first train St Thomas at 6:40 a.m. It consisted of one passenger coach and twenty-four freight cars. Quite a number of passengers were aboard the train. The train from Amherstburg reached St Thomas at 5:30 p.m.

July 25, 1873              The Canada Southern had completed their track to Fort Erie and were working at laying their rails to the entrance to the International Bridge. Their work was interrupted by a gang of men in the employ of the Grand Trunk who demolished the CSR track and then erected a blockade fence.

December 7, 1874      The Canada Southern Railway started operation of two fast express trains running between Detroit and Buffalo. The time between the two points would take nine hours. Several elegantly constructed sleeping coaches were put on by the Company. These cars were provided by the CSR, as the Great Western took issue with the Pullman Company over the use of Pullman Company cars over the CSR. The passenger traffic since the completion of the railway had increased far beyond the sanguine expectations of the management.

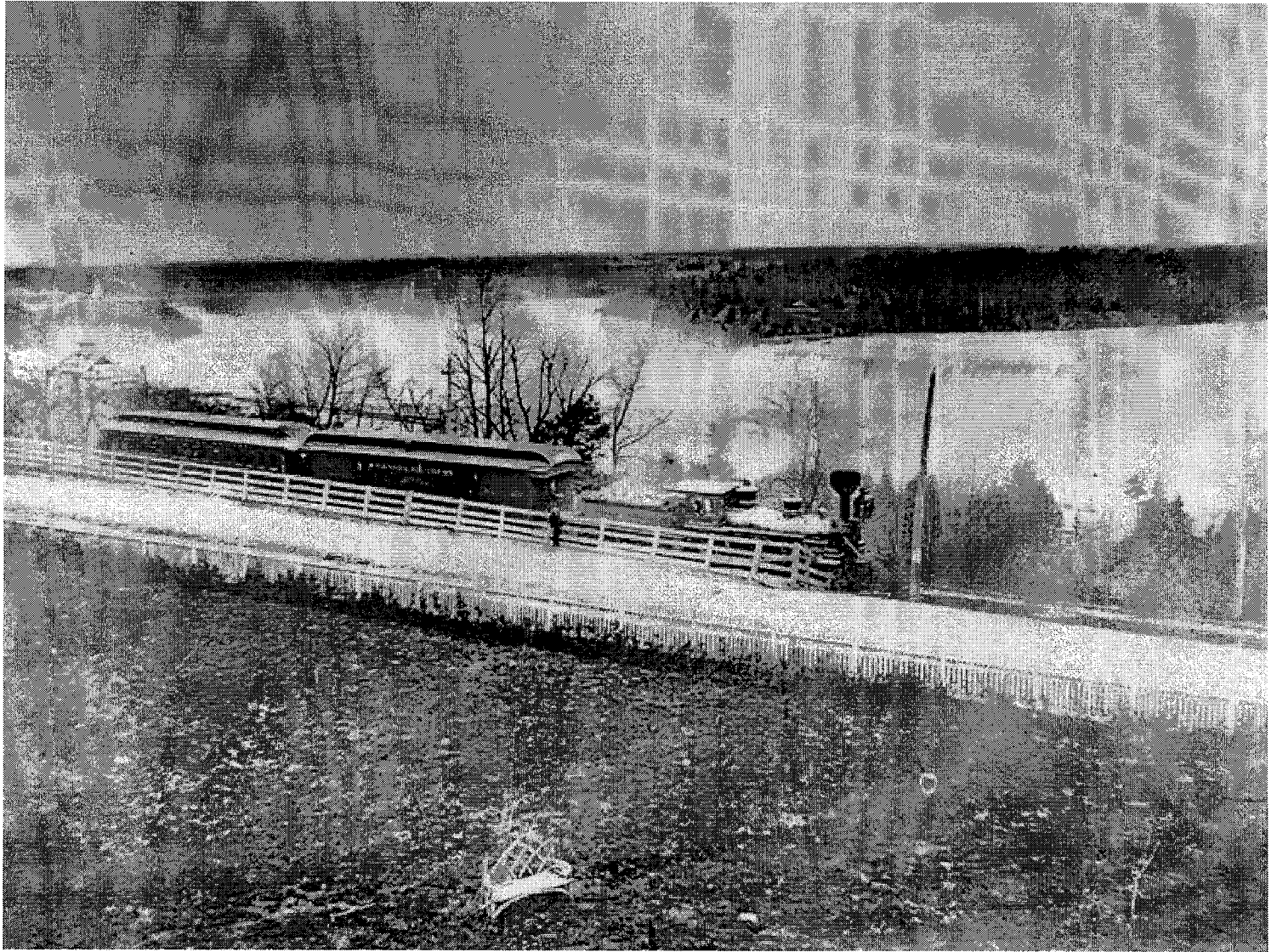


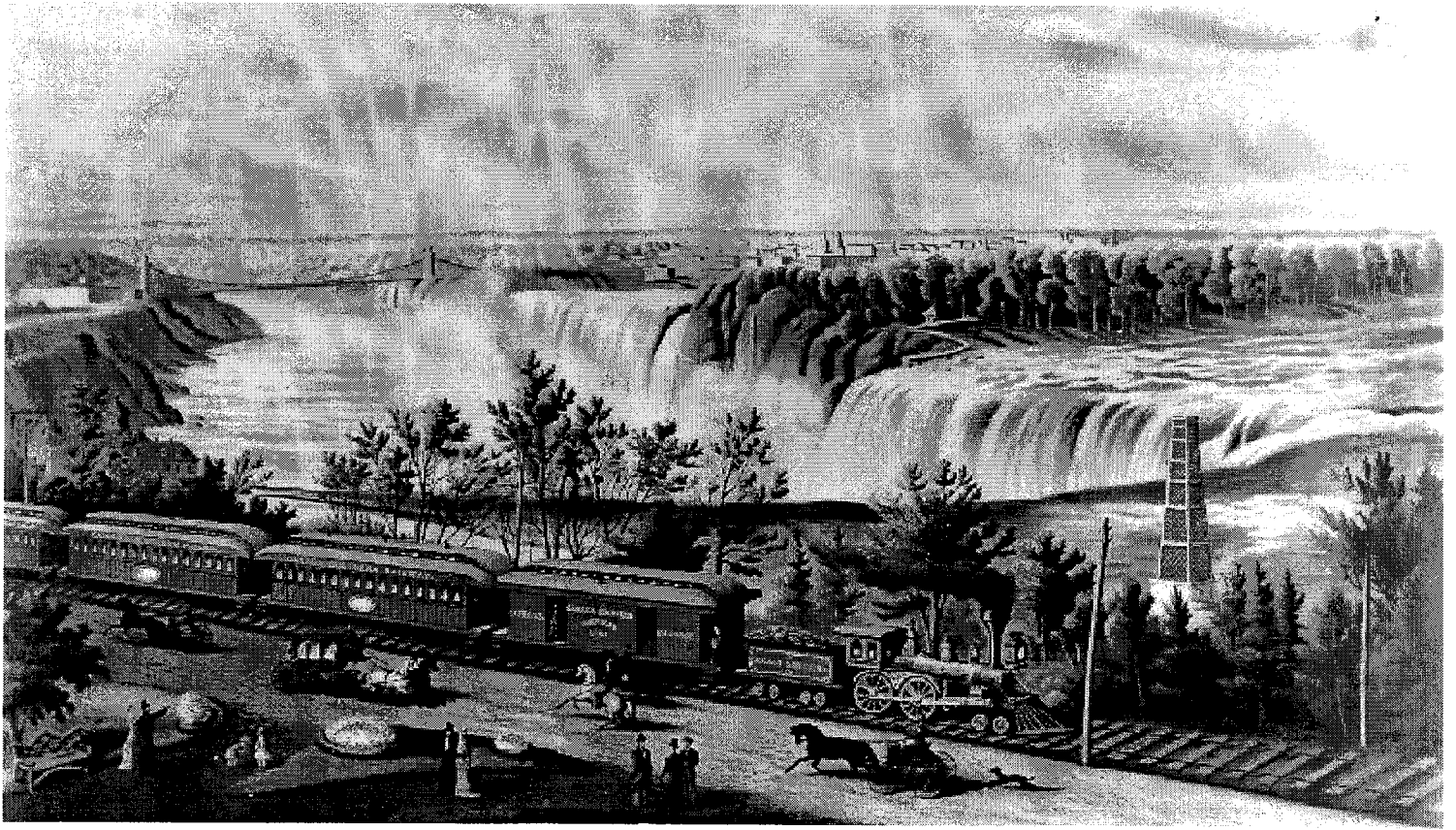
## WELLAND CANAL

APRIL 24, 1876

About ten o'clock on the evening of April 24th, 1876, the bridge-tender George Burns opened the double span swing bridge that carried the Canada Southern Railway over the Welland Canal. The bridge was opened to allow the tug-boat Mary O'Loughlin to pass. The red safety signal was set, and all the normal precautions taken for safety. Burns looked up the track and saw a train approaching and it wasn't stopping. The bridge tender knew the danger, for he ran out waving his red lantern to no avail the train kept coming. Burns stuck to his post on the bridge at danger to his own safety. Bystanders on the bank yelled at Burns to leave and he still stayed. The engine came to the end of the rails and plunged directly into the canal, with it came eight freight cars. Some of the cars ran over the submerged engine and cars and hit the pier of the swing bridge. The impact threw the swing bridge a full six feet off center. Everything was done to stop the train and yet it did not stop.

The only explanation and witness was Conductor Ferguson, at the rear of the thirty-three car train. Ferguson told that just before the accident that Fireman H. Jones had left his post on the engine to eat his lunch in the caboose at the rear of the train. In his place John Vanhoughton, the brakeman, had become the temporary fireman. From the safety of the caboose Conductor Ferguson looked up ahead over the train and could see the red danger signal and tried to notify the locomotive. The engine didn't slacken speed, and they saw by the fresh sparks spewing from the stack, that the new fireman Vanhoughton, was obviously on the deck shovelling coal into the firebox. Ferguson feared that Engineer Aaron Caddy had fallen asleep at the throttle. Engineer Caddy went down with the engine and died trapped in the wreckage. New Fireman Vanhoughton was pulled from the canal alive but died on the banks of the Welland Canal.





## CANADA SOUTHERN BRANTFORD BRANCH

Lost in time is that for a brief period had a Brantford Branch. In the mid 1870's a railway was built from Market Street Brantford across the Grand River through West Brantford up the hill to Burford, Norwich and to Tilsonburg. The Railway was called The Brantford, Norfolk and Port Burwell and was promoted by the City of Brantford. Shortly after near completion its train fell through the Grand River bridge taking out a span of the bridge. The railway was cut in two and because the railway was not fully completed the City of Brantford refused to pay the \$70,000.00 bonus to the railway and to the contractors. The railway's financial affairs were described as a "muddle".

A hearing was heard at the Brantford Town Council Chambers on a Wednesday night, November 15th, 1876 in which the company's Directors explained that they were out of money and the railway was in a mess and that the railway had to be leased as the company was out of money to buy equipment to operate the railway. The Directors disclosed they were having serious discussions with the Canada Southern Railway. They felt that a third railway system entering Brantford would make the CSR an ideal suitor. They even spoke of how their railway would be an excellent mechanism for the Canada Southern to extend their railway towards Toronto. The agreement with the Canada Southern would free the \$70,000.00 bonus. It was the ratepayers who had the choice of to whom to rent the railway. It was resolved that night that the Canada Southern would be allowed to enter the City of Brantford.

November 17th 1876 a special train left St Thomas at seven o'clock carrying W. K. Muir, General Manager, Superintendent Webster, and Chief Engineer Flagg all of the Canada Southern Railway. The train travelled over the B. N. & P.B. to Brantford to finish negotiations with the Brantford Directors.

The Canada Southern Railway laid rails across the repaired Grand River bridge through the back of downtown Brantford then curved to

station near Market and Colburne Streets.

By December, 1876 the Canada Southern had their Brantford Branch line in operation. The Brantford Expositor was able to run to run the following timetable:

### CANADA SOUTHERN RAILWAY

A train leaves Brantford for Tilsonburg every day at 1 o'clock, p.m. arriving there at 3:45.

Returning, leaves Tilsonburg at 7:00 a.m., arriving here at 9:15 a.m.

The agreement did not make the Canada Southern happy. Saturday night, April 8th, 1877, the Canada Southern declared war. In a surprise move the Canada Southern sent two heavy trains to Brantford, having on hand one hundred and fifty men on board. The station houses were unlocked and books papers and tickets were lifted out. Tool boxes were smashed open and the tools taken. Any of the ties and rails that had been supplied by the CSR were lifted onto the train. The trains arrived at 2:00 o'clock early Sunday morning in Brantford. Everything was under the command of Mr Flagg, the chief engineer. One train at once proceeded across the bridge with a gang of eighty or ninety men and they started to pulling up the rails. the rails were pulled up from market Street to the river bridge. With a great number of lanterns and a loud noise; the people of Brantford came out in the night to see what the commotion was all about, and were they surprised. When the police intervened the train was sent over the bridge and the rails were then pulled up in portions of West Brantford. Some citizens tried to stop the actions but all was in-vain. By morning the Canada Southern Railway had left Brantford.

May 1977, the Great Western leased the Brantford Norfolk and Port Burwell Railway. It would pass into the GWR, then the Grand Trunk fold and eventually the Canadian National Railways. The Great Western extended the B.N.& P.B. Railway through Tilsonburg to a crossing of the Canada Southern to a connection with the GWR's Canada Air Line. As part of this crossing the CSR did a realignment of its main line tracks at Tilsonburg.

A deliberate murderous train wreck; for three miles west of Tilsonburg station, late in the night of September 19th 1877, some men crept out of the woods of the Hower Farm. On a twenty foot high embankment they broke the spike heads off the inside of one rail on the north side of an embankment, the fish-plates were removed, and then the end of the rail was moved six inches toward the inside of the track; and the rail was then chained fast to the south rail. Grass was thrown over the rail to further hide their scheme. This was not an accident but a crime.

The Night Express east in the darkness was running fast, sixty miles an hour fast, making up time, for the train was thirty minutes late. The steam engine when it ran onto this altered track shot down the embankment turning upside down into the ditch, the tender thrown on its side. The two baggage and express cars shot past the end of the tender, over the stumps and the fence, into the woods, and were tilted half way over. The passenger coach ended up at the bottom of the embankment lying on its side. The sleeping car landed on the edge of the embankment. It was a miracle that none of the passengers were injured. Engineer William Hunt went down with his locomotive into the dump and was scalded. The fireman escaped injury.

The cause was train wrecking, probably was to steal and rob the innocent passengers in the wreckage.

HAGERSVILLE

NOVEMBER 28, 1877

A collision occurred on the Canada Southern about 3:00 o'clock Wednesday November 28th 1877 between Hagersville and Deans Station. The accommodation train from the west collided with a freight train from the east. The engines were completely demolished and two freight cars. Four other cars were thrown from the track. No person was injured the engineers and firemen jumped from the locomotive. The point where the accident is called DeCew's Pond.

January 16, 1879        An accident occurred in the Canada Southern yard near the International Bridge, at what is now Fort Erie. About 2:30 a.m. in the morning CSR engine No. 3 had orders to cross the International Bridge and to proceed to Black Rock, New York. After getting the signal from the yardman, the engineer put on the steam to enable the engine to get through the snow in the cutting east of the yard, as it was snowing very hard. The engineer was not able to see more than twenty feet ahead. Engine No. 14 was shunting at the east end and was just going into a siding off the main line when engine No. 3 came thundering along and struck broadside the engine throwing No. 14 into the ditch. The rails under engine no. 3 were bent and twisted so much as to throw that engine over. The fireman on No. 14 was thrown through the cab window into a snow bank. Both engines were smashed into a scrap heap. Nobody was injured.



WELLAND

FEBRUARY 2, 1879

On the morning of February 2nd, 1879 at 5:15 in the morning Canada Southern freight train No. 13 with mostly empties was westbound when it stopped on the Lyons Creek bridge about two miles east of Welland. The train stopped, and the engine was cut off and ran light to the Welland water-tank to obtain water. With the freight train standing on the bridge it appears that a flagman was not sent back. Extra train No. 119 ran at speed into the rear of the train smashing the caboose. The engineer and fireman had a miracle of an escape for they had no idea until they telescoped the caboose. The caboose and engine burned to the point of setting the very bridge on fire. Eighteen freight cars were destroyed. The bridge was saved only by the local farmers who ran to the scene of the disaster. Wrecking crews arrived to clean up the wreck and repair the bridge. A temporary telegraph office was set up in one of the wrecked boxcars.

---

## LIGHTNING SPEED.

---

111 Miles in 98 Minutes on the Canada Southern.

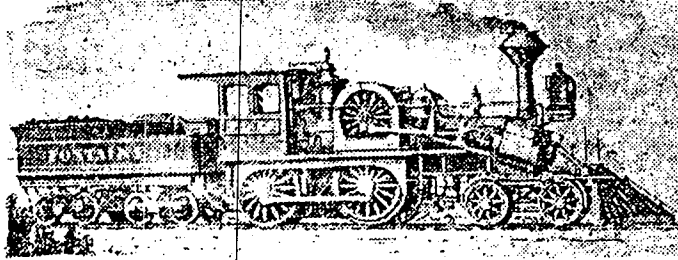
BUFFALO, May 6.—The Vanderbilt party, including a number of Canada Southern officials, left Detroit yesterday on a special train about noon. After crossing the river at Amherstburg, the Fontaine engine, with Engineer Clapp at the throttle, was coupled to the train at 12.38 o'clock. The Flyer pulled slowly out of the depot, the run was made to St. Thomas without a stop, and was a marvel of speed. The distance is 111 miles, and it was compassed, the managers of the road claim, in the unparalleled time of 98 minutes. The train left St. Thomas at 2.35 o'clock and reached Victoria at 5.03 o'clock. The distance is 118 miles, and five stops were made. The run was made in 153 minutes; sixteen minutes are deducted for time lost in making the five stops, which leaves the running time from Amherstburg to Victoria, a distance of 229 miles, in the superb time of 235 minutes.

---

MAY 7 1881

Hamilton Spectator

# Fontaine's Strange Railway Engine Was Seen in 1880's on the Old Canada Southern



—Photo Courtesy Railroad Magazine

## THE FONTAINE ENGINE

From 1829 when the Stephenson produced the Rocket, the first successful steam locomotive from which modern machines are descendants, all manner of men have tried to improve upon this simple yet rugged design, an article in Railroad Magazine points out.

One of the odd designs was the locomotive patented by Eugene Fontaine, of Detroit, in 1880 and which was to be seen in St Thomas on the Canada Southern track.

There were three Fontaine engines built at the Grant Locomotive Works and Railroad Magazine reports on the engine as follows:

"Fontaine's so-called friction drive became the topic of railroad men and many words were printed pro and con on the subject. The friction drive consisted of a large pair of driving wheels mounted over the boiler with conventional cylinders set at an angle for rotation. The pair of drivers rested upon a smaller rim attached to a bearing wheel or driver which in turn ran on the rail, the idea being that the friction gearing would produce higher speed. Some technical writers of the day were rather caustic in their criticism of the Fontaine engine and described it as a stock promotion hoax.

"The first of his three engines was of the 4-2-2 variety and had cylinders 16x24 inches. The upper friction wheel was 72 inches in diameter while the driver on the rails stood 70 inches high. The trailing wheel was 42 inches in diameter and the truck wheels 26 inches in diameter. A weight of 34,000 pounds was carried upon the drivers and the total weight in working order was 84,000 pounds. This engine ran upon the Erie Railroad and on the Pennsylvania before it was transferred to the New York Central & Hudson River for a trip to the Canada Southern. It was operated in the fall of 1881.

"Of the three Fontaine locomotives, Numbers 1 and 2 were to be passenger engines and Number 3 a freight machine of the 4-4-0 type. When Engine 1, just described, proved to be deficient in tractive force its mate, Number 2, was not completed and work was concentrated upon the completion of engine

Number 3. This was outshopped by Grant in September 1881. The driving principle was the reverse of that of Number 1, the upper drivers being 60 inches in diameter, the friction rim 70 inches and the main drivers resting upon the rails 78 inches in diameter. The cylinders were 17x24 inches and the truck wheels 40 inches in diameter.

"Number 3 was broken into service operating a work train used in constructing the Erie's Bergen County railroad. It was then transferred to the New York Central & Hudson River where in January of 1882 it ran a heavy train of eight cars from Albany to Syracuse. The weather was extremely cold and the engine did not perform very well. Continuing its westward journey, it was coupled at Syracuse to a 20-car train hauling iron salt to Buffalo. The train weighed 356 tons and the engine did not prove equal to the task. The upper wheels slipped to such an extent that the engine was declared not a success and had to have the aid of a pusher.

"In the following year all tests were stopped on the Fontaine engines. On January 12, 1885, an item in the Toledo Commercial Telegram announced: "The two Fontaine engines constructed a few years ago will be remembered by all railroad men, one of the engines with a freight train having made 15 miles in two minutes or 90 miles an hour on the old Canada Southern track between Toledo and Monroe, Mich. The two engines were constructed at a cost of \$45,000, including the expenses of the tests. They were tried on several roads only to demonstrate the axiom that what is gained in speed is lost in power. A greater speed than 60 miles an hour is not considered an advantage and the saving in fuel promised in this engine was not proved. The engines were tried on the Hudson River, the Canada Southern and the Oxford and Port

Austin railroads and Saturday the closing scene in their history occurred by their sale for \$2,700 to the Lake Erie and Western railroad. This road will place them in a shop where they will be reduced to the ordinary type of locomotive and the Fontaine engine will only live in memory."

### THE FONTAINE ENGINE.

#### EXPERIMENTAL TRIPS—LATE IMPROVEMENTS—EXPECTED RATE OF SPEED.

The Fontaine engine made her first experimental trips on Thursday and Friday, since coming out of the repair shops. Thursday afternoon at 3:30 p. m. she steamed from the yard with No. 1 express, consisting of one baggage and three passenger coaches. Engineer Clapp, one of the oldest express drivers on the road, had hold of the throttle, but before he had got nicely under way the boxing on one of the drive shafts commenced heating, which necessitated a delay of half an hour. In several places the engineer gave her a little head when she would answer and skim over the rails at the rapid rate of a mile a minute at any point on the road. When the western end of the Canada Southern line was reached she still had a half hour to make up.

The large concourse of people standing at every street crossing indicated that something unusual was about to happen on Friday morning. It was needless to make inquiries, as all were talking about the funny looking engine steaming towards the city, and her probable capabilities for speed. As she was uncoupled, all kinds of questions were asked from Mr. Clapp, who spoke in eulogistic terms of the merits of the locomotive for speed, and her ability to handle one of the afternoon expresses. He was satisfied in his own mind that the existing doubt among machinists and engineers about sufficient power was all bosh. After the newness gets worn off, the train she hauls will appear to be nothing more than a black streak passing over the surface of the earth. The improvements put on the engine under the superintendence of the able machinist, Mr. W. A. Short, General Master Mechanic of the Canada Southern Railway, were a new and stronger friction wheel axle, the friction and drive-wheel made into one casting, which is now every way adapted from its massive look for durability and strength. Many other minute workings of her machinery were also overhauled and refitted.

Two new engines are building at Patterson, New Jersey, to be used for the transfer of heavy trains entirely. On these engines the wheels will be inverted; the small wheels will be on top, and the two trail wheels will be of the same size as the drive, and joined similar to those of other locomotives. As soon as the frost gets out of the ground and the road bed thoroughly settled, the rate of 90 miles an hour will be tried, which the inventor claims is near the top of her running powers.

April 5<sup>th</sup> 1881

ST Thomas  
Journal.

January 24, 1881. The trucks on a freight car on a freight train broke in the afternoon and cars were thrown off the track.

September 26, 1881. The Canada Southern westbound passenger train from Buffalo arrived at Amherstburg. The train was loaded on to the car ferry "Transfer". The whole train was crossing the Detroit River from Amherstburg to Stoney Point, Michigan this fall night. The wind was blowing hard and combined with a strong current the car ferry was deflected from its proper course and instead of entering the ferry slip or dock struck the wood piers or piles and did so with great force, and bounced backwards. In the wake of the severe rebound the sleeping coach "St Clair" broke loose and plunged from the boat into the river. There were only a few passengers in the car. After the car was in the water it floated back up to the surface that allowed people to escape. A second coach was hanging over the end of the boat, the passengers ran to the other end of the car to effect their escape. A small boat was launched that rescued six passengers right out of the car windows.

December 17, 1881. The CCSR station at Perry caught fire and was damaged.

May 5, 1883 A most disastrous collision occurred on the Canada Southern Railway at Woodslee station shortly after seven o'clock on the night of May 5th. The second section of the stock express No. 24 telescoped the rear of the first section. Five empty flat cars on the first were badly demolished and the debris was piled up on the depot platform. The front of the locomotive of the second section was badly smashed. Five cars of hogs and two cars of cattle were overturned and forty animals were killed. The fireman of the second section, Neil Darrach, was injured when he jumped from the engine.

## ESSEX CUT-OFF WINDSOR BRANCH

In 1882 the Canada Southern Division of the Michigan Central had found that the western terminal of Amherstburg was not suitable because ice blockades on the Detroit River in winter had stopped or delayed the ferry crossing. Trains after crossing the river to reach Detroit, had to then head north from Grosse Isle. The ice problem did not seem to be a problem for the Great Western Railway at Windsor. Work was started on a "cut-off" or the "Windsor Branch" in 1882 and on Monday January 1st, 1883 the first regular passenger train arrived at Windsor-Detroit. The run was made in 22 minutes from the Essex Centre junction to Windsor. The route was over flat country with only a grade in the most of seven feet to a mile. The branch was doubled tracked for about four miles.

## WELLAND CUT-OFF

For a decade the Canada Southern Division of the Michigan Central Railway had two routes to cross the Niagara River. The mainline ended at Fort Erie and the railway crossed on the International Bridge to Black Rock and Buffalo, New York. The other route was by turning north, on the outskirts of Fort Erie, onto the old Erie and Ontario, that it had leased in 1872. Trains would travel north along the Niagara River through Chippewa past the Falls to the Suspension Bridge controlled by the Great Western and now the Grand Trunk. The new Niagara Cantilever Bridge was being built by the Michigan Central.

July 1883 work was progressing on the Welland Cut-off. The railway track would run from the eastern end of Welland diagonally to a junction with the Erie and Ontario near Inspiration Point just behind the Falls. Grading was completed in July 1883 and rails were laid that August. A new Michigan Central station was built in downtown Niagara Falls only a block away from the Cantilever Bridge. The E&O tracks left for Niagara on-the-Lake on one side of this station. Work started November 1883.

November 4, 1883      A bad freight accident occurred early in the morning four o'clock on the Canada Southern Railroad at Springfield. An freight train standing on a side track at the station and it started backing out on to the mainline, but right in front of an eastbound freight. Locomotive No. 95 drawing the eastbound train was wrecked. The engineer and fireman jumped and saved themselves. Ten or more cars were wrecked.

April 2, 1887      About 2 a.m. a Michigan Central collision occurred between two and three miles east of Springfield. The westbound freight collided with a eastbound freight. Nearly thirty cars and both engines were totally destroyed. The wreck was piled up as high as the telegraph poles for twenty-five yards, and merchandise was scattered in every direction.

September 8, 1893      Two Michigan Central trains were wrecked about 2:30 a.m. A freight train consisting of heavy beef cars was enroute to Detroit was badly demolished by a fast passenger express train enroute to Chicago. The express ran into the rear end of the freight train. The engine of the express was badly wrecked as was the baggage car. Bothe engineers escaped by jumping. Nobody was injured.

## THE NIAGARA CANTILEVER BRIDGE

The Niagara Cantilever Bridge was the first cantilever bridge built on North American soil. The bridge was built by the Niagara Bridge Company, representing the Vanderbilt interests. Vanderbilt of the New York Central & Hudson River Railroad also controlled the Michigan Central Railway, and in turn the Canada Southern Railway. A rail link was needed at the Niagara Frontier without having to pay rental to the Grand Trunk Railway for the use of the famous Niagara Suspension Bridge. The rival Grand Trunk had obtained control of the Great Western Railway of Canada in 1882, and thereby the Suspension Bridge. The site for the bridge was to span the deep Niagara Gorge with the fast running current of the Niagara River below. False work could not be constructed in the gorge and river.

The general length of the bridge would be 910 feet; divided into two cantilevers of 395 feet each, and one center span of 119 feet. The towers were of wrought-iron were 130 feet high, that rested on masonry piers 39 feet high. The height from the surface of the Niagara River to the base of the rails were 239 feet. It would be double track and had to be strong enough to bear the weight of two trains crossing at the same time.

On April 9th, 1883, a contract for the construction of a bridge was signed with the Central Bridge Company of Buffalo, New York. The Chief Engineer of the Niagara Bridge Company and the designer of the cantilever bridge was Charles C. Schneider. On April 15th, excavations for the piers were commenced, June 26th the first stone for the foundation was laid, and finished September 3rd. The anchorage piers were started August 27th and completed October 1st. The steel towers were finished on September 19th, 1883, and the erection of the shore arms of the cantilever commenced September 28th and the river arms work started October 28th. The center span was completed by November 22nd, 1883.

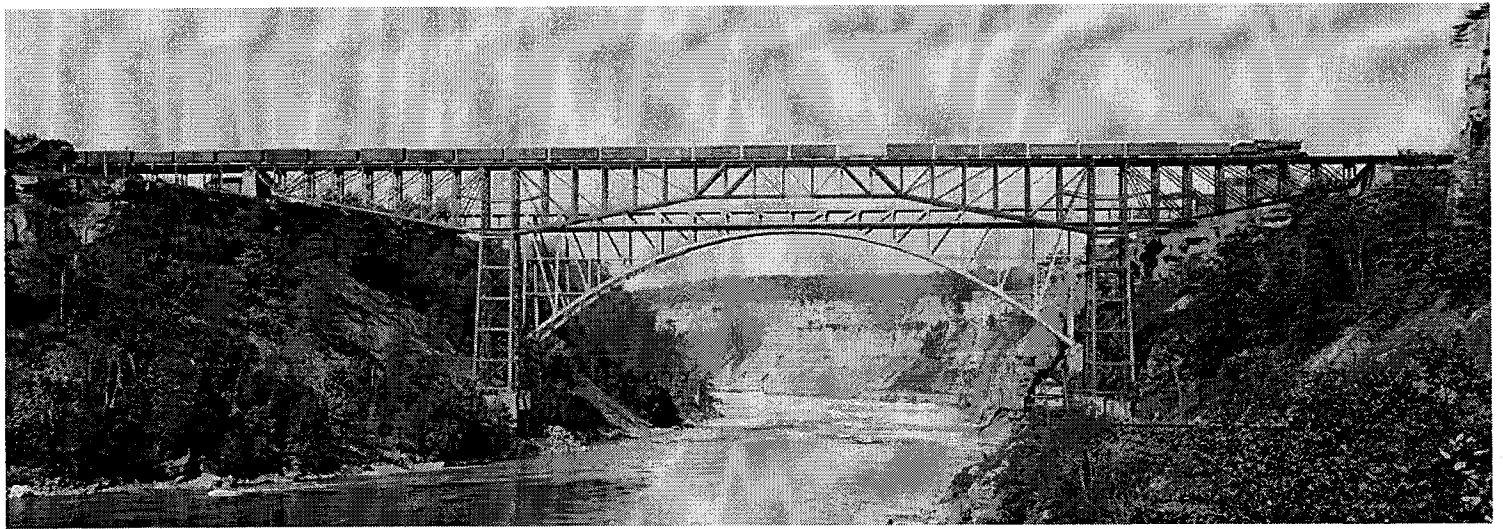
The contractors were working against a deadline of November the first. Everyday afterwards the contractors had to pay a penalty of \$500.00 per day. They were late and by November 21st the bridge was nearly completed.

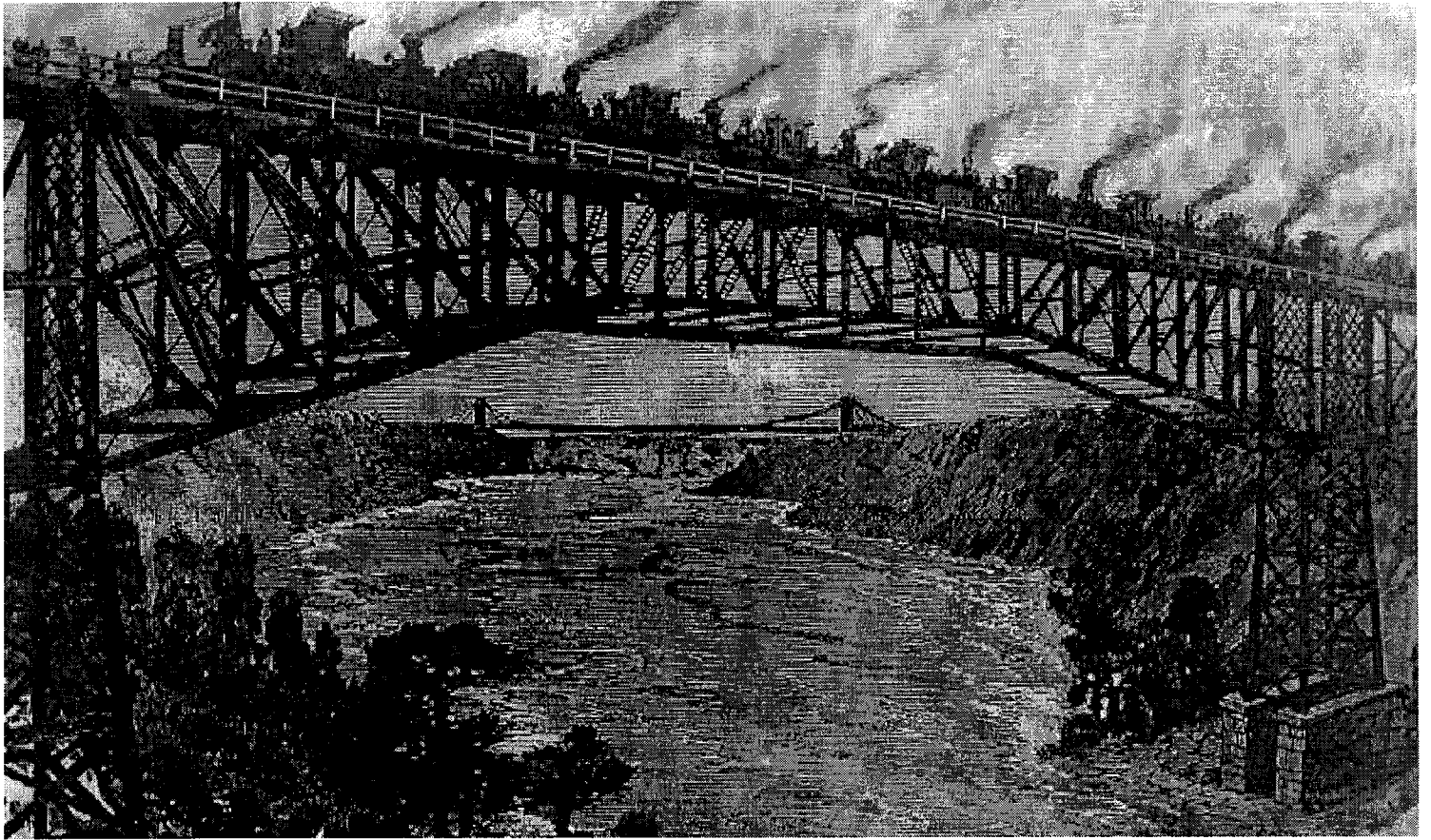


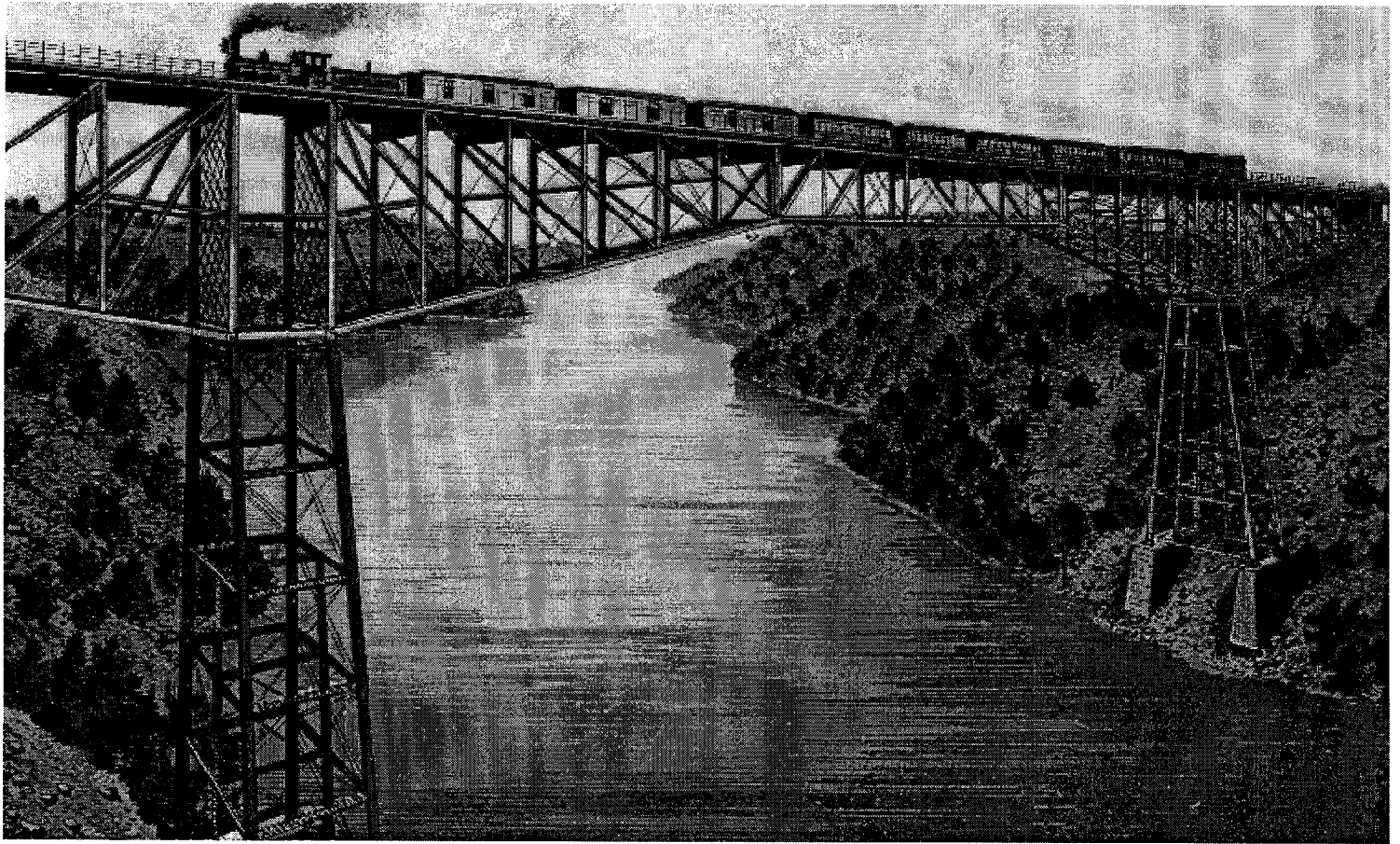
## THE CANTILEVER BRIDGE

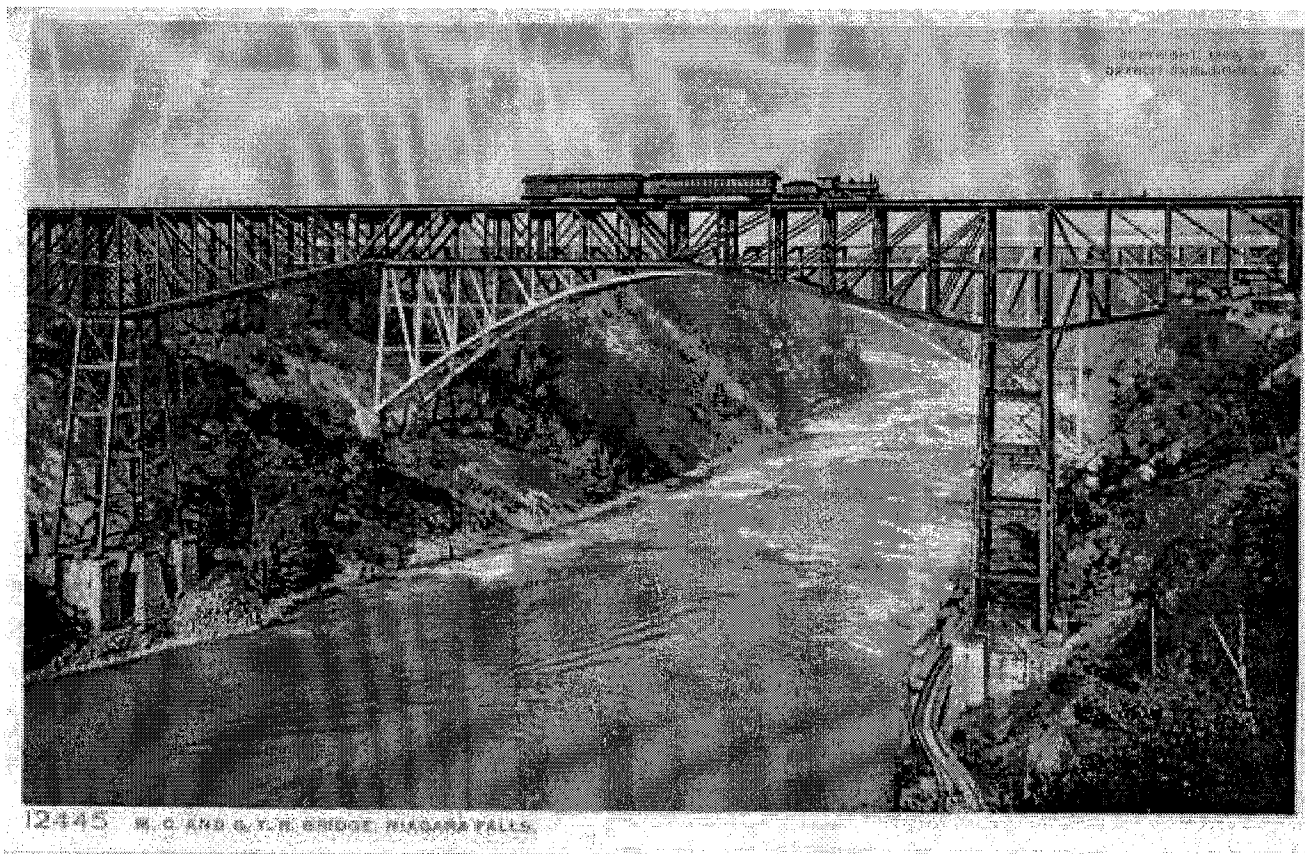
DECEMBER 6, 1883            Around 11:45 in the morning Superintendent Burrows of the NYC&HR took his little pony engine no. 513 and moved cautiously out on to the new Niagara Cantilever bridge, large crowds cheered as the engine moved out further and further over the Niagara Gorge. It passed the center portion and moved onto the Canadian side. The Grand Trunk engines saluted the first locomotive to cross the first cantilever bridge in the world with their whistles, and Mr Burrows responded in kind. The little engine remained on the Canadian side about ten minutes, being unable to leave the bridge because the rails and approaches had not been completed on the Canadian side. Engineer Chapman then backed the little engine back over the bridge to the American side. The first engine crossed the new bridge at Niagara Falls in safety.

DECEMBER 20. 1883            The supreme test of the Niagara Cantilever Bridge was made successful. The day was clear and cold. At nine o'clock a train of heavy engines were coupled together and steamed out onto the bridge on the north track, from the Canadian side. Earlier a number of engines had been run alone or in pairs back and forth across the bridge. There were twenty locomotives, eight bunched in the center of the train and the others separated by gravel cars. When the engines came to a stop, Engineer Sackett on engine No. 247 blew a salute to the American side. Then there was a great chorus of shrill whistles in return echoing through the gorge. The New York Central had brought many officials and famous civil engineers and bridge builders to this inspection on elegant drawing-room passenger cars..



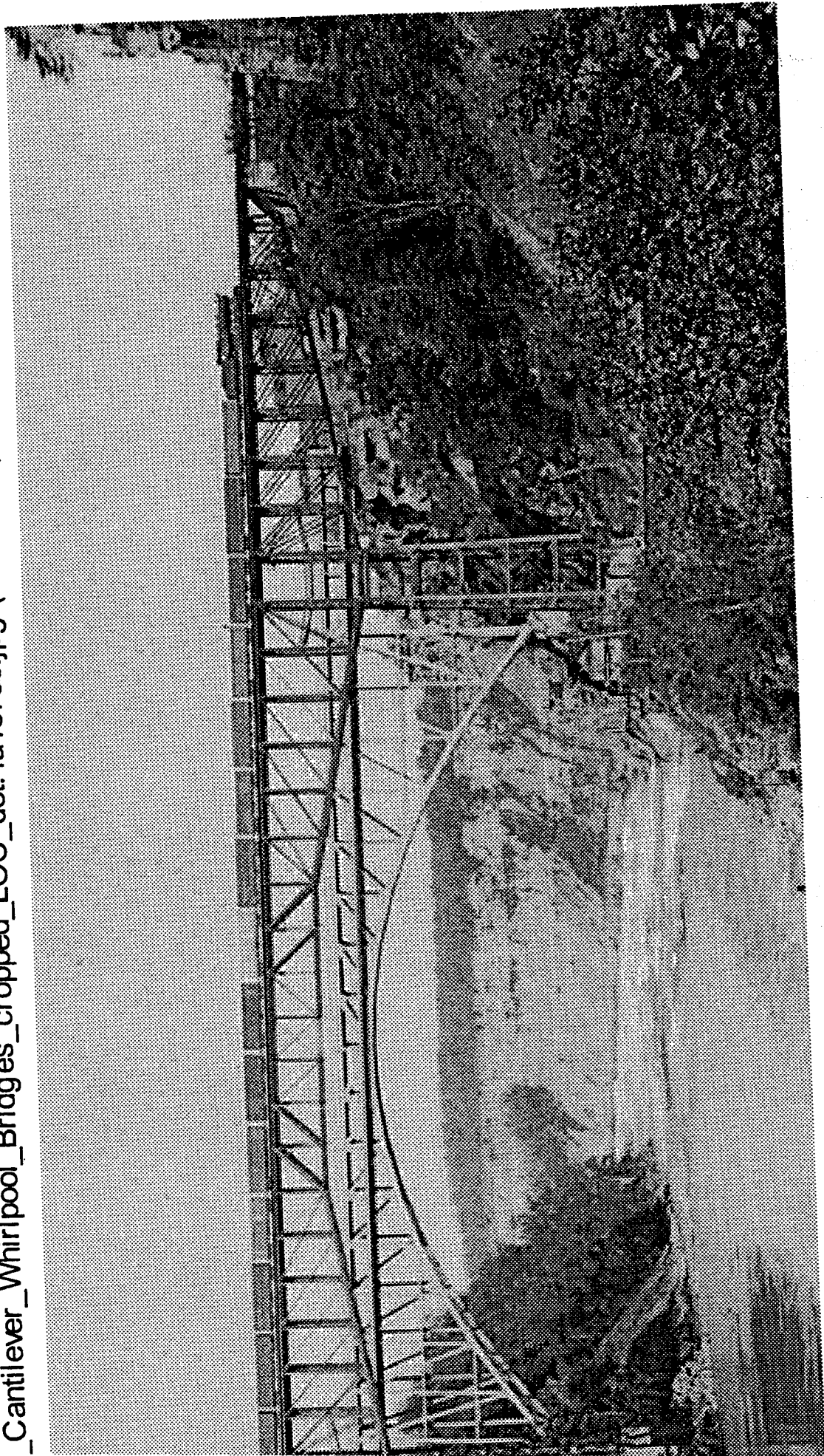








\_Cantilever\_Whirlpool\_Bridges\_cropped\_LOC\_det.4a18788.jpg (1000x352)



FARGO

NOVEMBER 2, 1886

November 2nd, 1886, Michigan Central Conductor Henry Abbott gave the go ahead signal to the Engineer of his westbound way freight No. 41 to pull out of the siding, at the junction with the Erie and Huron Railway, at the town of Fargo. It was 4:00 o'clock on Tuesday afternoon. The signal was set to give the M.C.R. train the right of way. The train was only crawling at three or four miles per hour onto the diamond crossing. Suddenly it was hit by the Erie and Huron mixed train that did not stop at the stop signal. Michigan Central locomotive 406 was hit, derailed and badly wrecked. Two or three freight cars of the Erie and Huron were thrown from the track. Engineer T. McCorney and his fireman escaped injury. The Erie and Huron would later be the Sarnia section of the Pere Marquette Railroad

## DISASTER

JULY 15, 1887

For nearly twenty years the Great western Railway, and in turn the Grand Trunk leased the London and Port Stanley Railroad from the City of London, the railway's owner. Steam trains ran from the port and resort of Port Stanley north to the City of London.

At 7:30 on the Friday summer evening of July 15th, 1887 a Grand Trunk excursion train had left Port Stanley and was heading north. It was a busy day for it had been the day of the Baptist picnic. In the cab of the GTR locomotive, were Engineer Henry Donnelly and Fireman George Angles. It left and headed north. The excursion train as it reached the Wellington Street crossing, in St Thomas, the engine crew could plainly see ahead that the semaphore signal was set against them. The Engineer and Fireman saw a slow moving Michigan Central freight train crossing right in front of them, on the M.C.R.-L.&P.S. diamond crossing. Donnelly at once slowly applied the train air brake. The brake did not work. The train would not stop. Donnelly then quickly reversed the engine. The train still would not stop. Fireman Angles could see the cars of the freight train coming up fast. He yelled to Donnelly to jump, and Donnelly refused. Donnelly yelled to the Fireman: Jump! Angles jumped just moments before impact. Engineer Donnelly stood at his post, engine reversed and air brake valve slammed shut. It would not stop. The excursion train hit the freight train. It struck and cut through two cars of petroleum in the Michigan Central train. In that very moment there was a huge explosion and fireball. The engine and baggage car were wrapped in a sheet of flame, the first coach tipped up on end, and it caught fire. In a very short period of time the whole neighbourhood was ablaze, trains and buildings. Passengers panicked as they escaped the railroad cars. Citizens quickly volunteered at the rescue. The fire department arrived and they could do little. Railroad engines approached from three directions, and managed to pull the undamaged freight and passenger cars out of the blaze. A local crowd of men were rushing about trying to pull the injured passengers out of the crushed train. The firemen started, it was felt to gain control of the fire, when suddenly another oil tank-car exploded with a terrific blast, a fire-ball of 100 feet, scorching and



burning hundreds rescuers and spectators in a second. Buildings on the south side of the track were now on fire. After the explosion the work of rescuing the unfortunate victims pinned under the wreck commenced and in half an hour the charred remains of nine persons were pulled from the debris all of whom were burned beyond identification, many were women and children. The body of Engineer Donnelly was freed from underneath his engine. The entire area around the railroad crossing was an ashen and burnt scar. Twelve persons had died in a moment, and hundreds of St Thomas citizens had been badly burned and maimed.

## LONDON AND PORT STANLEY RAILWAY

The London and Port Stanley Railway was incorporated in 1853 and the railway between London and the Lake Erie port of Port Stanley October 2nd, 1856. For the most part the railway was built, owned and operated by the City of London. It was operated as a steam railway. On April 25th, 1870 the Great Western Railway gave the L&PS running rights into the GWR London station. In 1874 the railway was leased to the Great Western Railway for a term of twenty years, this lease would expire in 1894. In 1882 the Grand Trunk Railway created a takeover of the Great Western Railway and therefore took over the GWR lease of the L&PS. In 1887 the City gave the Michigan Central running rights over the L&PS from St Thomas to London. Therefore until 1894, M.C.R. and GTR trains ran over the same railway track, but in 1894 with the lease expired the City of London leased the L&PS to Hiram Walker's Lake Erie and Detroit River Railway, and this would become the Pere Marquette Railway, a decade later. Therefore the Michigan Central and the Pere Marquette railroads shared the same track. While the GTR had to live with the M.C.R. it did not have to share its station and terminal with it.

## LONDON

The Michigan Central obtained trackage rights from the Grand Trunk Railway to run over the London and Port Stanley in 1887. The L. & P. S. was owned by the City of London. It had been leased to the Great Western Railway in 1872, The G.T.R. in turn merged with the G.W.R. in 1882. The Michigan Central intersected with the L. & P. S. at St Thomas.

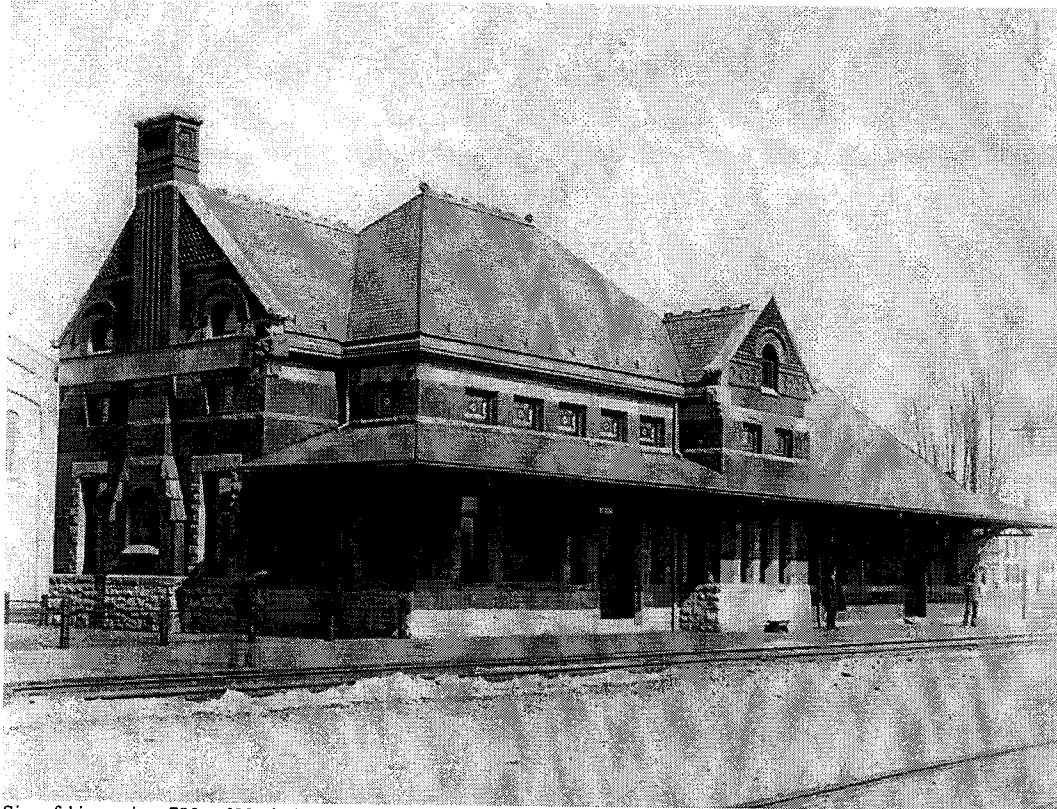
On August 12th, 1887, it was reported that the Michigan Central Railway had nearly completed their own London terminal at the corner of Bathurst and Clarence Streets. Track had been laid, and ballasting was nearly completed. The roundhouse was ready to receive locomotives in its four stalls. A brick station and freight house were nearing completion. There was a delay in the completion of the construction due to a shortage of bricks.

The Michigan Central extension to London was formally opened on the morning of September 12th, 1887 when M.C.R. engine No. 380 pulling nine freight cars and two passenger cars steamed into the small brick station at 8:25 A.M. On board the first train were a number of officials and fifteen passengers. The train was in charge of Conductor Henry Abbott, with Engineer Henry Jones. A large number of people congregated on Bathurst street between the freight and passenger stations cheered when the train arrived. Engine 380 did some shunting in the yard and then was turned on the turntable, it left for St Thomas at 9:45 A.M. Two trains ran each way daily.

Arriving London	8:25 A.M.
from St Thomas	6:40 P.M.
Leaving London	9:45 A.M.
for St Thomas	8:45 P.M.

# File:Michigan Central Railway Station London ON LonPL069832f.jpg

From Wikipedia, the free encyclopedia



Size of this preview: 790 × 600 pixels.

Full resolution (1,525 × 1,158 pixels, file size: 242 KB, MIME type: image/jpeg)



This is a file from the Wikimedia Commons. Information from its **description page** there is shown below.  
Commons is a freely licensed media file repository. You can help.

## Summary

**Description** **English:** A glossy black and white print showing a front and side view of the Michigan Central Railway Station in London, Ontario, Canada. Two men are standing on the platform. The Michigan Central Railway Station, built 1886-7, was situated on the south-east corner of Clarence and Bathurst Streets. It was designed by F. H. Spier, a famous Detroit architect (source: "Canadian Rail Passenger Review Vol 1" p.65). The first Michigan Central passenger train pulled into the station on September 12, 1887 (London Free Press, Monday, September 12, 1887 p.3 c.4) and the last train pulled out on June 30, 1915. The station was demolished in 1937.

The inscription, not seen on the digital copy, was added to the original photograph in 1939: "The Michigan Central Railway station, erected 1886-7. About 1890."

**Date** circa 1890

**Source** James Egan Collection, London Public Library, Ivey Family London Room, London Room Photograph Archives - PG L63, Local identifier: 32104033409790

**Author** James Egan (?)

**Camera** 42° 58' 50.28" N, 81° 14' 43.51" W (<http://toolserver.org/~geohack/geohack.php?>

**location** [pagename=File:Michigan\\_Central\\_Railway\\_Station\\_London\\_ON\\_LonPL069832f.jpg&params=42.98063373614919\\_N\\_-81.24541997909546\\_E\\_type:camera\\_region:U](#)

## Licensing

This Canadian work is in the public domain in Canada because its copyright has expired due to one of the following:



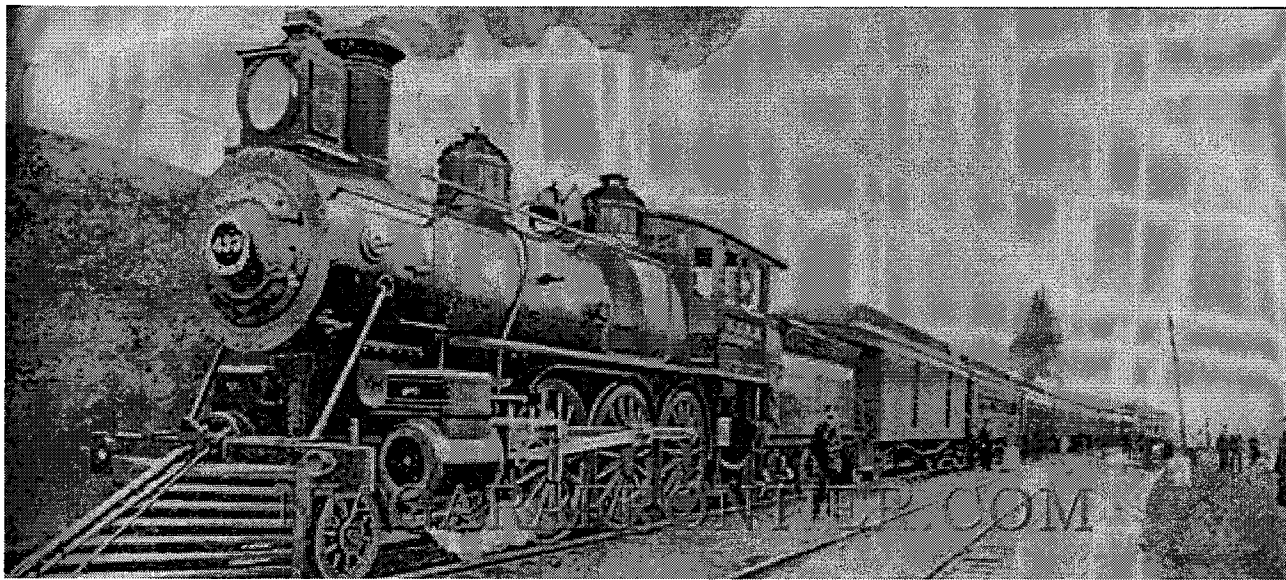
1. it was subject to Crown copyright and was first published more than 50 years ago, or

it was *not* subject to Crown copyright, and

2. it is a photograph that was created prior to *January 1, 1949*, or

3. the creator died more than 50 years ago.





## YARMOUTH CENTRE

FEBRUARY 5, 1890

February the 5th just before midnight 1890, a Michigan Central westbound freight had left St Thomas with about forty loaded cars. The west bound train had engine No. 386, just fresh from the shops, with Engineer John Cook and fireman W. King. The Conductor was Frank Abbott, and the brakemen were L. G. Thompson and Albert Hill. It was travelling over the mainline at only fifteen miles per hour as it approached the station at Yarmouth Centre.

There was an eastbound stock train up ahead, engine No. 393, with Engineer Daniel Darrach, and fireman L. Elliott. The Conductor was Thomas Cahill and the brakemen were Joseph Smith and J. Liddell. Engine 393 had slowed, and the switch was thrown, to put the stock train into the siding at Yarmouth Centre. The engine pulled its train into the siding but misjudged the distances and the brakes just didn't hold and so did not stop in time and came out the other end of the siding, splitting the switch, so No. 393 ran back on to the mainline just at the moment that the westbound arrived. The eastbound engine 393 collided with the westbound engine 386 right at the switch, and with enough force to throw the engine off the rails and to topple over in front of the station. The freight cars following crashed about the tiny station and the two interlocked engines.

The mainline was clear for Cook's train west and then in an instant the mainline was fouled. Engineer Cook died but the rest of the crews escaped with some injury. The two engines were buried into the roadbed and with the debris. The station building was safe but the platform was kindling wood.

## WATER TRACK PANS

The Michigan Central announced November 18th, 1892 that they had completed putting in interlocking switches at all its railroad crossings and that the company were about to put in water troughs at Welland, Fargo and Tilbury Centre. These troughs would be in the middle of the tracks, 14 1/2 inches deep troughs and 1400 feet long to filled with the water required for a steam locomotive. The locomotives would be equipped with a retractable water scoop located under the tender. The fireman would be able to lower that water scoop into the track pan and scoop up water on the fly into the tender without stopping. Trains would be moving continually without the time required to stop at water towers.

The railway in January 1893 had completed a water trough or track pan at Taylor. Another pan was completed at Tilbury in February. Monday May 3rd 1893 the first Michigan Central engine and train ran over the railroad from Windsor to St Thomas without having to stop.

---

## RUSCOMBE SPUR

APRIL 14, 1893. The Michigan Central built a three mile spur at Ruscombe station running into the timber-limits owned by Councillor Smith.

OCTOBER 4, 1893. Michigan Central locomotives were able to run directly into Buffalo over the New York Central. The NYC had strengthened their bridges between Niagara Falls and Buffalo on the American side of the border. The through trains that went by Niagara Falls previously had to change their engines at the Falls because of the light NYC bridges.

NOVEMBER 30, 1893. Locomotive 431 made a record run over the Michigan Central with a recorded speed of 68 miles per hour.

AUGUST 17, 1894.            The Michigan central Railway was gradually working in its mogul engines on its freight trains. On Thursday August 16th, 1894, a train of merchandise pulled by one of the largest engines made the run from St Thomas to Windsor without stopping in three hours and twenty-five minutes. The train did not stop for water was scooped from the track pans.



SEPTEMBER 9, 1893            There was a surprise at the Michigan Central station in the morning when it was learned the Pullman sleeper "Mascot" had arrived on the eastbound morning passenger train from Chicago. The entire Pullman was occupied by the Archduke of Austria, Franz Ferdinand and a complete entourage of Austrian nobility.

MAY 4, 1895.                The Hiram Walker Company had leased the London and Port Stanley Railway from the City of London in 1895. It attempted to nullify the running rights agreement the Michigan Central had obtained from both the Grand Trunk and the City of London. The Walker Company claimed that the Michigan Central did not have the right to bring into London local merchandise and passengers from St Thomas. The issue had become heated and was referred to arbitration in Toronto, when finally it awarded that the Michigan Central did have the right to carry both local merchandise and passengers between the two cities. Hiram Walker was building his Lake Erie and Detroit River Railroad eastward from Windsor towards St Thomas but in 1904, his railways would become the Pere Marquette Railway.

MARCH 20, 1896.            A serious accident took place in the morning at Highgate. Conductor John Sheehan's east-bound freight took the siding and tied up for the night on account of a raging snow storm. Engineer James Wilson had charge of engine No. 392 and Adolphus Wilton was his fireman. In the morning the train crew opened the switch, and the engine ran out onto the mainline to clear the track of snow around the switches so as to get a good run out of town with the full train. It then backed on to its train getting ready to leave.

At this very same time a snow plow extra west-bound came along. With a snow plow out front, engine No. 422 was in charge of Engineer Batzold and Conductor Edward Moylan. The switch was still open, it had not been closed and snow-plow extra 422 turned into the side track and the plow train rammed the 392. The plow turned the 392 completely upside down and the engine lay in a snow bank. Engineer Wilson managed to get out but fireman Wilton was lodged under the locomotive. When the engine was soon righted and Wilton was extricated all were surprised he had only a dislocated shoulder.

## FARGO

MARCH 24, 1896

Tuesday, March 24th, 1896 at 4:30 in the morning a west-bound extra freight in charge of Conductor Edward Moylan was taking the siding at Fargo when the train parted. The rear end struck the front end with considerable force. Conductor Moylan who was in the cupola of the caboose was thrown against the side of the car.

OCTOBER 14, 1897.

## FAST TIME

A very quick run was made over the Michigan Central by engine No. 431. When the North Shore limited left St Thomas at 11:51 A.M. and it was several minutes late. Engineer Joseph Worden was at the throttle and he was given orders to get into Windsor on time, if possible. The distance between St Thomas and Windsor is 111 miles and it took the train just 99 minutes to cover that distance.

December 15, 1900.

## RIDGETOWN

The boiler of a Michigan Central engine attached to a freight train exploded three miles west of Ridgetown early in the morning. Engineer Sweeney and Head-End Brakeman Knowles were badly injured and Fireman Long was scalded.

DECEMBER 16, 1895 The Michigan Central had completed grading on a three mile spur south from a junction near Welland into the Wainfleet peat bog. The Ontario Peat Company operated a plant at the end of the branch from 1894 to 1905.

mainfleet-siding-small.jpg (3905x1445)

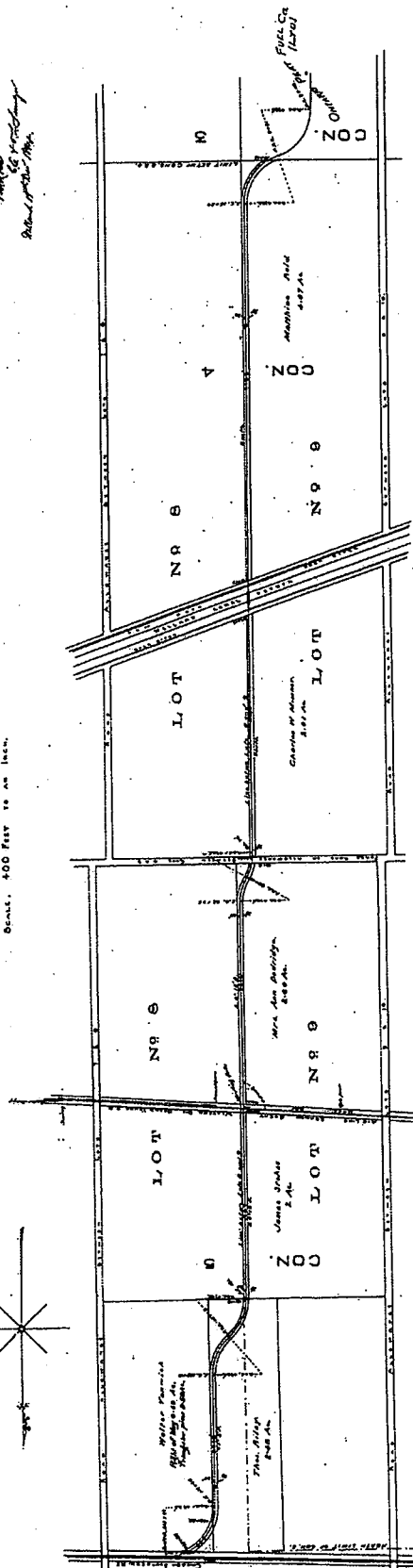
PLAN OF:

BRANCH RAILWAY LINE FROM  
RAILWAY TO ONTARIO PEAT  
FUEL CO'S. WORKS (LTD.)

TOWNSHIP OF WAINFLEET

COUNTY OF WELLAND ONTARIO.

DEALS. 400 FEET TO AN INCH.



February 8, 1898        The New York Central has placed four new engines on its western lines. The engines are 937, 938, 939, and 940 and they are among the most powerful which have been placed on the railroad.

February 15, 1898       The Michigan Central ran seventy freight trains over its railroad in 24 hours, that's 2325 cars.

March 16, 1898        A head on collision occurred about one mile west of Ruscomb station at about five o'clock in the morning on March the 16th 1898, when two freight trains collided. The trains were running at about 35 miles per hour when the two engines came together with terrific force. The engines are a total wreck. The eastbound engine had partially mounted the westbound locomotive. None of the trainmen were hurt as they all jumped from their engines in time.

October 10, 1898        About three o'clock on the morning of October 10th, 1898 a fire was discovered at the Michigan Central roundhouse at Leamington. The alarm was given and the firemen turned out promptly but the fire had gained control that it could not be extinguished until the engine-house was totally destroyed. A locomotive and a passenger car was also destroyed in the fire.

January 14, 1899        The Michigan Central Express due at Welland at 2:00 o'clock in the morning, of January 14th, 1899, and was thrown from the track at the interlocking diamond with the Grand Trunk Railway .The reason for the derailment was that the airbrakes malfunctioned. The engine, tender, two baggage cars and two passenger were thrown in the ditch. The engine was badly wrecked. The Engineer Lawdry, fireman Currie and Baggage man Howard all had close escapes from death.

July 22, 1899        A handsome coach No. 621 was completed in the Michigan Central shops and will commence running on the St Clair Division tomorrow. It was built to replace the coach burnt at Leamington.

August 29, 1899        The Amherstburg Branch of the Michigan Central was supplied with a new engine and the trip between Amherstburg and Essex were made in a much shorter time.

September 7, 1899     On account that the passenger engines on the Michigan Central Railway would be running straight through from the Niagara River to the Detroit River, coaling plants were built at Waterford, Tillsonburg, Taylor and Ridgetown.

November 8, 1899      A pitch-in occurred at Fargo because of fog at 5:45 on the morning of November 7th, 1899.

1899

The Michigan Central announced March 7th 1899 that it would build two 4-6-0's and two 0-6-0's at the St Thomas shops.

The Michigan Central are to open a new gravel piton the Leamington line between the 4th and 5th concessions. March 11,1899.

A Michigan Central Klondike locomotive pulled seventy five cars from St Thomas to Windsor March 14 1899.

The Michigan Central have a new station at Courtright. March 31, 1899.

RIDGETOWN

DECEMBER 15, 1900

The boiler of a Michigan Central engine attached to a freight train exploded three miles west of Ridgetown early on the morning of December 15th, 1900. The boiler explosion, probably caused by a dry boiler crown sheet, scalded and injured Engineer Sweeney, Fireman Long, and head-end Brakeman Knowles.

### DOUBLE TRACK

January 4th, 1901 the Michigan Central announced that it was making every preparation to handle a large passenger traffic to be generated by the Pa-American Exposition to be held at Buffalo the summer of 1901. The company had installed a block electric system between Welland and Niagara Falls and the railway would expanded over the whole Canada Division. Forty miles of double track would be laid as fast as weather would permit. Two steam shovels and three gangs of men had started work laying a double track between Dufferin and Townsend; between Dutton and West Lorne, and between Essex and Comber. When the work was completed the Michigan Central had 177 miles of double track.

## VICTORIA YARD-FORT ERIE

JANUARY 21, 1901

January 21st 1901, Queen Victoria had just died this day, and at the Michigan Central Victoria Yard in the early morning hours a freight train was assembled to follow the No. 21 Express westbound. The freight was standing on the side track. A big new Klondike engine was backed and attached to the freight train. The engineer of the freight thought that he had cleared the mainline track. The freight was sitting too close to the switch. When Express No. 21 came steaming in; the cylinder of the Express engine caught the cylinders of the Klondike engine. The cylinders and steam chests on both engines were smashed. The whole side of the Express train was scraped. While none of the coaches were damaged, the express locomotive was disabled and a new engine had to be secured to take the Express to St Thomas.

February 18th, 1901 The private car of President H. B. Ledyard caught fire while waiting on a siding at Tonawanda New York.

A large gang of men were working at double tracking the Michigan Central between Cayuga and Hagersville February 22nd 1901

## A FAST RUN

JULY 29, 1901

The Michigan Pan American, train No. 17 over the Michigan Central Railroad which leaves St Thomas at 1:45 PM. made a great run to Windsor. The train was 55 minutes late in leaving St Thomas but it arrived only five minutes behind time. The run from St Thomas to Windsor 111 miles was made in 105 minutes. A delay of nine minutes was experienced at Ridgetown waiting for No. 8 to pass. At some stages a speed of 70 miles per hour was attained. Engine 483 hauled the train.

## DOUBLE TRACK

MARCH 29, 1901. The Michigan Central gave a contract to a Mr Dewhurst to double track its railway between Essex and Ruscomb, a distance of eight miles. Mr Dewhurst was also given the contract to take of gravel from the company's ballast pit on the Leamington branchline. The work was finished by May first. The Michigan Central was preparing for a large passenger traffic to attend the Pan-American Exposition at Buffalo in the summer of 1901. Work was well under way double-tracking the eastern portion of the railway.

MAY 22, 1901. The railway have three hundred men at work laying double track, expecting to complete forty miles by that summer. Eight miles of double track between West Lorne and Dutton had been completed on May 7th. Ten miles between Cayuga and Hagersville and twenty-three miles between Tilbury and Essex had been completed in June of the year before. A block signal system had been installed from Welland to the Grand River bridge at Cayuga.

APRIL 4, 1906. It was reported that work had started on the double-tracking of the Michigan Central between Tilbury and Ridgetown for nearly thirty miles. The track will be graded twenty feet from the present rails, and it will be necessary to move two hundred thousand yards of earth. The work was completed by July 1st, 1906. The railway would be double-tracked between Windsor and St Thomas



The Michigan Central opened a gravel pit May 1901 about four miles west of Leamington was one of the busiest points in Ontario. The pit was situated on the old Spencer Daniels farm on the 4th Concession of Gosfield about a mile from the Meresa Townline. The entire farm is a gravel ridge averaging over twenty feet and the quality was pronounced first class. The pit is reached by a spur coming off the Leamington Branch of the Michigan Central at Andrew Whittles farm. Work on the spur started on March 1st and by May 4th the track had been laid, ballasted, fences installed and sidings completed. At the pit a small station was erected Mr Berry formerly of Tilbury was in charge.

Digging at the pit was started March 20th and the railroad took out 120 cars of gravel per day. The cars were loaded by a steam shovel in three to five minutes. The steam shovels were kept at work both day and night. The output was increased to 180 cars per day.

For hauling the gravel out from the pit, the railroad employed a new type of engine given the name "Klondike's". These monster engines for their time could make fast time with a train of 60 loaded cars of gravel. This gravel was being used for the double-tracking of the mainline.

## J. PIERPONT MORGAN SPECIAL

Friday morning, October 25th, 1901 a watchman was posted at every road crossing on the Michigan Central Railway between Windsor and Niagara Falls. It soon became apparent that a very special train was coming over the line, bearing J. Pierpont Morgan and a party of Episcopal bishops and prominent clergymen who had been attending the church convention at San Francisco. J. P. Morgan was the greatest railway financial tycoon.

The magnificently appointed train, made up of seven heavy Pullman sleeping, drawing room and cafe cars. The train had left Windsor at exactly ten o'clock. The locomotive that pulled this train was No. 482 a brand new Schenectady 4-4-2 I-80 class Atlantic. At the throttle was Engineer James Cains and his Fireman was H. O'Brien. The Conductor was Harry Abbott.

The Morgan Special made a remarkable run over 228 miles in less than 225 minutes. The train was running at over 70 miles per hour on portions of the Canada Division. The speed was no doubt possible because of the new double track Canada Division and the fast 79 inch diameter driving wheels of the four month old Atlantic type.

## LEAMINGTON

OCTOBER 8, 1901

Between Pettit's Siding and Comber a horse appeared in the centre of the track and although the engineer had the bell ringing and the whistle shrieking, the horse still continued running up the track in front of the train. The horse was struck by the engine and passed under the engine throwing the engine and a couple of coaches off the track. There were many passengers on the train and they were thrown from their seats.

## A PRIZE LOCOMOTIVE

NOVEMBER 18, 1901

The high type of fast passenger locomotive (4-6-2) shown at the Buffalo Exposition and which gained the Gold Metal will be used on the Michigan Central Railway. The engine was used for a short time hauling freight until all its tendencies to overheating had disappeared. Known as a K Class, engine No. 253 has a weight on drivers of 95,000 pounds, driving wheels of 79 inches and cylinders of 21 x 26.

## CAYUGA

APRIL 29, 1902

A bad wreck occurred at ten o'clock the morning of April 29th 1902 when an eastbound train of 41 cars pulled by MCR engine No. 419 was crossing the large iron bridge over the Grand River at Cayuga. Ten freight cars jumped from the track and fell fifty feet hurled into the Grand River. Engineer Edward Wilson, his engine and the first ten cars had managed to cross safely.

## COMBER

DECEMBER 4, 1902

December 4th, 1902 The westbound way freight was pulling across the eastbound tracks going towards the freight shed. The block signal was set, barring all trains, but it was broken and refused to work. An eastbound freight train was observed charging at 40 miles per hour forward. Danger signals were shown. The engineer saw the danger, reversed his engine, applied the emergency brakes and then he and his fireman jumped from the locomotive. The engine smashed into the freight car.



DECEMBER 4, 1902.           A smash up occurred on the Michigan Central Railway at Comber. The westbound way freight was pulling across the eastbound tracks in its endeavor to reach the freight sheds. The block signal, barring all traffic coming east, had been set, but refused to work. An eastbound freight was coming at a speed of forty miles per hour. Danger signals were given. The engineer of the incoming train reversed his engine, applied the emergency brakes and the engineer and fireman jumped. No one was injured.

APRIL 12, 1903.           A wreck occurred on the Michigan Central east of Waterford when four cars on a westbound freight derailed because of a broken axle. Two of the freight cars were reduced to kindling wood. No one was hurt.

March 19, 1904.           The engine roster of the Canada Division of the Michigan Central was to be increased. The M.C.R. had received some half dozen new Atlantic type engines had been received and were running in Canada. More Atlantic engines had been ordered and two of these engines were to be assigned to the No. 31 express.

APRIL 12, 1904.           The Michigan Central Railway's forty new locomotives ordered months earlier had just been delivered and were placed into service. Out of four big Pacific type engines two were given for operation on the Canada Division, the other two went to work in Michigan. Ten of the compound consolidation engines were allotted to Canadian service. All the engines had been built by American Locomotive Company in Schenectady, New York.

TILLSONBURG

JANUARY 30, 1903

Four o'clock on the morning of January 30th, 1903 the westbound flyer No.1 ran into the rear of the local just as the local was pulling out of a siding. The passenger train struck the caboose smashing it to kindling wood and plowed through five or six freight cars. Nobody was injured in the collision.

WINDSOR

FEBRUARY 20, 1903

On the afternoon of February 20th, 1903 a Michigan Central yard engine with two boxcars was running along the riverfront at a good rate of speed. Engineer Kelly looking ahead noticed that the switch leading to the car ferry slip was turned, the route was open to the river. Engineer Kelly and Fireman Hopps had barely time to jump before the big engine ran out to the end of the car ferry slip and engine and boxcars plunged right off the end into the Detroit River.

WINDSOR

FEBRUARY 21, 1903

On the morning of February 21st 1903 what could have been a serious accident nearly occurred in the Michigan Central yards at Windsor right in front of the Dining Hall. Engineer McCormick was on yard engine 338 and with two boxcars wanted to pull out on to the main track. When he looked up the track he thought the switch tender had given him the "All Clear" signal and he proceeded onto the mainline. The switch tender's shanty had obstructed his clear view. and he was unknown that the switch tender has given the "All Clear" signal to the oncoming No. 11 Express and not his yard engine. Express engine No. 485 smacked into the yard engine and the two boxcars. Engine 485 was badly damaged but nobody was injured.

It was reported June 3rd, 1903 that Michigan Central yard engine No. 337 which had laid at the bottom of the Detroit River nearly all winter was razed and repaired at the St Thomas shops and was back in service.

PERRY

MAY 16, 1903

A rear end collision occurred at three o'clock on the morning of May 16th, 1903 one mile east of Perry station near Welland. Engineer William McIntyre was running his freight train eastbound when he failed to see a standing freight on the mainline. Engineer McIntyre was killed in the collision.



The forty new locomotives of the Michigan Central ordered some month previously had all arrived by April 12th 1904. and were all in service. Of the four big Pacific type locomotives, two were placed on the Canadian Division and the other two assigned to service in Michigan. The six compound Consolidated type locomotives are retained for service of the Canada Southern Division mainline. Twenty of the thirty freight engines have been distributed on various divisions in Michigan and ten were allotted to Canada Division. They were all manufactured by the American Locomotive Works at Schenectady, New York.

### KETTLE CREEK BRIDGE

The work of strengthening and filling the great Kettle Creek viaduct at St Thomas was completed by December 3rd 1904. Work had started in June 1903. New abutments and new supports along with extra bents and a concrete ballast deck made the bridge capable of carrying the heaviest engines then available. The work of filling had been started in 1903, 18,000 cars of earth and fill had been deposited in the ravine and the bridge itself. The bridge had been 1398 feet long had been shortened by 300 feet on the east end and 100 feet on the west end, making the restructured bridge 1000 feet long. Seventy-five men, twenty-eight teams, three work trains and a steam shovel has moved 216,000 cubic yards of fill. The earth was secured from pits at Highgate and Taylor.

## WINDSOR ROUNDHOSE FIRE

A fire was discovered in the old Michigan Central roundhouse at about eight o'clock Sunday evening, October 2nd, 1904. There were four engines in the roundhouse, two having steam up and two were dead. Employees managed to run the two live engines out of the building and into the safety of the yards, but the other two could not be moved. In order to avoid an explosion one employee dashed into the burning building and opened the locomotive's steam safety valve.

The Windsor fire department arrived, but the roundhouse being outside the city limits, so there were no fire hydrants and the hoses could not be connected. The building and the two engines could not be saved.

Wednesday morning eleven o'clock in the morning of November 29th, 1904 Michigan Central had a westbound freight train near the end of its run to the Windsor terminal. The long double-header was about to cross the Pere Marquette Railroad at the Pelton crossing. The signaller sat high above the crossing in his signal cabin looking down on the crossing in front of him were the levers that controlled the signals and the switches. That morning at eleven when he looked down at the crossing he could hear the whistle of an approaching train asking for a clear routing through the interlocking, correct in the rule book. Then he realized it wasn't one whistle but two whistles and from different directions. There was a Pere Marquette passenger train approaching the crossing. Both trains were approaching the crossing at the same speed, a collision was about to take place. The signal-man had to make a split second choice, and given that the Pere Marquette train was a passenger train; he threw the signal and switch against the Michigan Central train quickly. The block signal system set the derailer, a protective device that put a block against the rail, that would deliberately derail an engine if it did not obey the signal with the purpose to derail equipment rather than allow a collision between two trains. The Michigan Central doubleheader hit that derail and was thrown off the track. One of the engines remained upright between the rails; but one of the locomotives turned over and fell into the ditch followed by half a dozen freight cars. The three members of the locomotive crew were ditched with the locomotive. Engineer Bruce Little and Fireman John Mathews were scalded by the escaping steam from the wrecked locomotive. Brakeman Thomas Stewart was pinned under a boxcar. The Pere Marquette passenger train stopped and its crew jumped down from their train and came to the rescue of the injured MCR crew. Engineer and Fireman trapped in the cab were difficult to remove out of the debris.

November 29, 1904

The baggage car of the Pere Marquette was pressed into service as an impromptu hospital car for three injured men and they were conveyed to Walkerville where the ambulance and physicians were waiting. Their wounds were dressed and they were taken to the hospital.

The opinion seemed that the signal operator had acted prematurely in throwing the signal-derail, for the Pere Marquette train was able to stop before the crossing.

FORT ERIE

MARCH 18, 1905

About 6:30 Saturday night March 18th, 1905, a Michigan Central meat train of 32 cars with engine No. 328, left the Victoria Yard at Fort Erie for the Delaware Lackawanna and Western Railway across the Niagara River via the International Bridge at Black Rock, New York. As the train was coming down the grade from the yards the air brakes failed and the train could not be held. It ran down the hill past the MCR station and it split the switch between the station and the bridge and the whole train was diverted onto an old industrial spur that ran down to the Baxter Elevator or Mill on the banks of the Niagara River. The train kept to the rails while it passed over a curve and only left the rails at the end of the track at the foot of Jarvis Street. The train continued to run on top of the edge of the frozen bank until opposite the residence of one Frank Pattison, where an empty boxcar was standing on the elevator track. The train hit the car and pushed it along when the engine hit some wood and diverted the train over the bank and into the Niagara River. The empty boxcar landed on the ice. The engine lay part on the bank and part in the water, The locomotive tender went into the river. Nine cars and the locomotive had run beyond the rails.

The wrecking crane could not go down the elevator siding. For three days workmen tried to clean up the train wreck. A temporary track was laid down to the river and on the Tuesday the engine was pulled out of the river.

## St Thomas Shops Locomotives

The Railway and Marine World reported in February 1906 that the Michigan Central Railroad had discontinued the building of locomotives at its Canadian shops at St Thomas and that for the last two years that the shops only built switching engines. The Company at that time reported that the Company had all the switching engines it required. in Canada and that locomotive building had been discontinued.

The switching locomotives completed at the St Thomas shops of the Michigan Central was the last order, The six engines were being used on the grade between Niagara Falls and the Montrose yard. They are 0-6-0's, 19" x 26" cylinders, with 44" drivers, weighing 155,900 pounds. March 1906.

## DOUBLE TRACK

The second track or double track was completed between Ridgetown and Tilbury, 30 miles, and freight service had started over it by the fall of 1906. The sections between Bridgeburg-Fort Erie and Welland 19 miles and the section between Hagersville and Springfield 47 miles, was completed by November of 1906. The entire Canada Division was doubletracked

## NIAGARA FALLS

MARCH 28, 1905

A Michigan Central and a Pere Marquette train came together in a head on collision on the American end of the great Niagara Gorge cantilever bridge. Three cars were derailed and pitched over in to the street below, a distance of thirty feet carrying with them a switchman's shanty. Patrick Whalen who was seated in the small building was badly cut and bruised.

## ST THOMAS HURRICANE

JUNE 8, 1906

Western Ontario was swept by a Kansas like hurricane Friday afternoon, June 8th 1906. The winds attained a speed of fifty to sixty miles per hour. The hurricane struck Sarnia, Chatham, Ridgetown and St Thomas.

The terrific storm hit St Thomas at 2:30 with lightening and a downpour of rain and hail. The railroad shop roof about six hundred feet long, together with the cupola of the coach shop were completely blown off. A part of this debris was carried 200 feet by the wind striking the roof of the machine shop. The smokestack was blown from the blacksmith shop and part of the roof of the locomotive paint shop was also lifted.

One hundred MCR telegraph poles were blown down between Ridgetown and Rodney cutting communication.



ST THOMAS

AUGUST 4, 1906

The Michigan Central had obtained trackage rights from the City of London in 1887 to run over the London and Port Stanley Railway from St Thomas to London. In 1894 the Grand Trunk surrendered its lease of the L&PS and the railway was leased to the Lake Erie and Detroit River railway, and the later was absorbed by the Pere Marquette Railroad. Therefore by the summer of 1906 PMR trains were running over the railway from Port Stanley to London and the M.C.R. ran on the same rails from St Thomas to London.

On the morning of August 4th, 1906, the Pere Marquette morning train No. 40 left Port Stanley at 8:00 A.M. and headed north for a 9:00 o'clock arrival in London. The train consisted of P.M. engine No. 4, a 4-4-0 and six empty passenger cars with a few passengers in the last car. The Engineer was W.F. Robson and the fireman was Arthur Goodhue. Robson was known to be a strict by the book engineer.

Earlier, Michigan Central train No. 131 had left London at 7:15 heading south. The engine was another 4-4-0 M.C.R. No. 8869. Engineer Jones and fireman George Hemphill was in the cab. The normal protocol was that the earlier MCR train would arrive first at St Thomas, meet the No. 40 then switch onto the MCR mainline. This morning, when PMR No. 40 arrived; the semaphore was clear, and the MCR train wasn't to be seen. Conductor Drake jumped off the passenger train and entered the station. When Drake emerged from the station and gave the Engineer Robson the "all right" signal. Robson started the engine, then backed down to a switch with the intent of waiting for MCR No. 131. Conductor Drake came up to the engine and asked, "what are you waiting for." Robson replied that "I haven't seen No 131." Drake said "No 131 has come and gone." Robson started the engine and off the Pere Marquette went north. There is a sharp curve then the high bridge. Approaching the curve Engineer Robson was hanging out the cab window to get a better view of the track ahead.

Michigan Central No. 131 was 45 minutes late, due to having to PMR extra 38 at Glanworth. M.C.R. No. 131 had not left St Thomas, but was steaming on the track ahead. It was just nearing the High Bridge, when the both engineers spotted the on-coming trains. Robson on the PMR yelled at his fireman George Hemphill, "Look out George, get off!" The engineer shut off the throttle and the airbrakes then he jumped. Fireman Hemphill did not jump, but instead confused, crossed the cab to the engineers side. It was too late. The same thing occurred in the cab of the Michigan Central train, Engineer Jones, jumped but fireman Arthur Goodhue delayed. It was too late. Michigan Central engine No. 8869 smashed into Pere Marquette engine 41, 150 feet north of the High Bridge. The tenders were driven into the passenger cars, the cabs were smashed. The fifty passengers on the trains were safe. The firemen on both the M.C.R. and the P.M. trains, Arthur Goodhue and George Hemphill were dead.



Michigan Central Railway derailment near St. Thomas, circa 1905. Original caption identifies the wreck as belonging to the M.C.R., but one car is marked New York Central Railway by Elgin County Archives

TILBURY

FEBRUARY 1, 1907

An eastbound freight train crashed into the westbound local freight head-on in the Michigan Central Tilbury yards at seven o'clock on the night of February 1st, 1907. Fortunately no lives were lost as the crews of both trains jumped from the cabs. About fifteen cars were smashed up in the collision. The debris was all cleaned up that night and the track was open again for traffic. The eastbound train was running under the block signal.

## ESSEX EXPLOSION

AUGUST 10, 1907

The village of Essex is situated on the Michigan Central Amherstburg branch.

A disastrous dynamite explosion occurred at Essex Ontario at 10:10 on the morning of August 10th 1907. A car of nitro-glycerine, containing a hundred boxes of explosive, went off without warning in the Michigan Central yard. Two Michigan Central employees and the former Mayor of Essex died in the explosion. The beautiful railway station was wrecked and the adjacent planning mill of Laing, Ritchie & Company was demolished. Conductor Thomas Berry speaking later, told that the train crew; Brakeman Leo Conlon, Baggage man Joseph McNary and himself had observed dynamite leaking from the car, and found that upon investigation, the dynamite leak was molten. Some of the boxes of explosives had fallen over and Berry realizing the dangerous situation moved away quickly but Conlon and McNary were still standing next to the boxcar. Berry said in a moment he saw Conlon and McNary blown to atoms in one large explosion. The dynamite tore up the track and left a hole fifteen feet deep at the point where the boxcar once stood. The MCR station was wrecked and a locomotive smashed. Windows of nearly every store in the village was shattered. The blast was felt in Windsor sixteen miles away. The former Mayor of Essex James Brien died from shock.

The boxcar of dynamite was being delivered by the Amherstburg plug or local train to Dunbar & Sullivan at Amherstburg, The old 4-4-0 had stopped at Essex briefly to do some switching when the dynamite leak was first seen. Its crew Engineer Cottrell and Fireman Madigan both were hurled by the explosion out of the splintered cab.

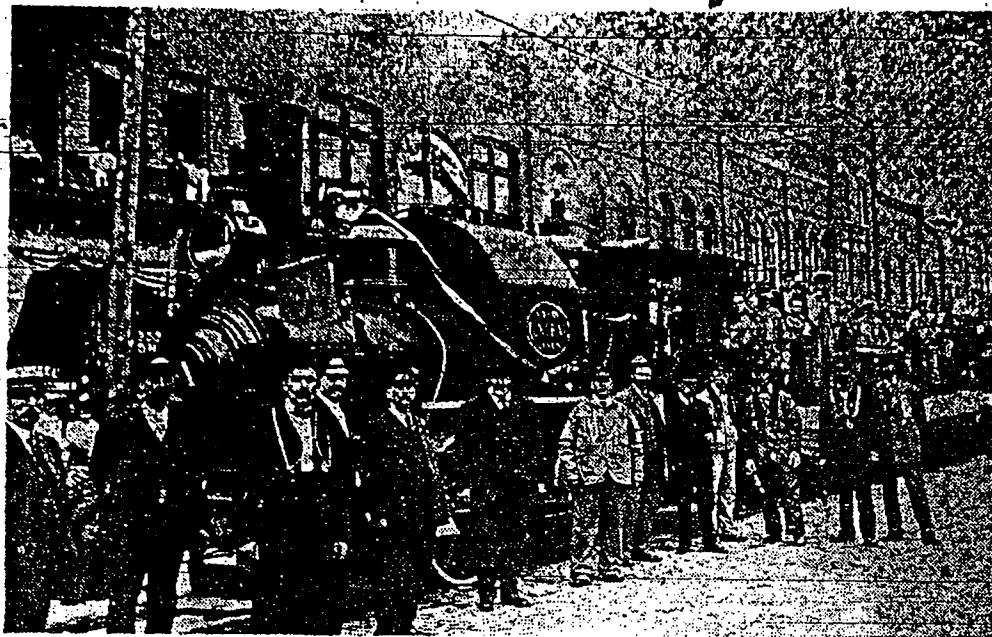
An inquest was held a few days later in Essex. A dynamite expert Leo DeLong stated that the dynamite was green or improperly cured. A shippers bill of lading from the Pluto Power Company of Black Rock, New York listed just 100 boxes of powder cartridges weighing 5,000 pounds. The Michigan Central claimed that they had no knowlege that the shipment was explosive.

## WATERFORD

APRIL 8, 1910

Friday, April the eighth 1910 Waterford. The Buffalo to Detroit merchandise fast freight crashed into the rear of a drag freight a half mile east of Waterford station. Engine 8418, on the fast freight, was an MLW 4-6-2 Pacific type built in 1908. The collision occurred at 11:55 PM. The accident occurred just east of the watertank near Waterford. The drag freight; in charge of Conductor Learn, had orders to take the siding at Waterford, but before doing so the engine was uncoupled and was taking water at the tank. Conductor Learn had sent the brakeman back up the track to flag and or protect the rear of the train. The fast freight just passed the flagman and crashed into the caboose of the standing train at twenty-eight miles per hour. Seven freight cars were thrown from the track and the van and three cars of the standing freight were smashed to kindling wood. The big locomotive was hurled across the eastbound track and turned on its side. Engineer Oscar Foss and Brakeman Thomas Jeffery were badly scalded in the cab of the locomotive. Brakeman Jeffery would die a few days later of his wounds. It would seem that Engineer Foss, on going around the curve, east of Waterford; Foss had glanced out and saw the disc signal which showed a clear light. He mistook it for the home signal, which did show red. He thought he had a clear track and kept the steam on, ignoring the flagman.

## When a Train Ran Along St. Thomas' Main Street

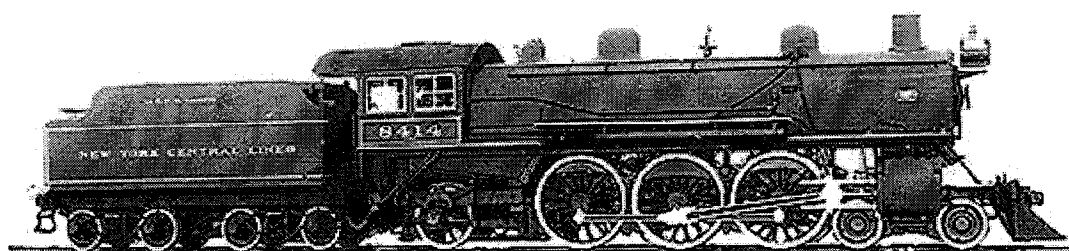


One of the greatest Labor Day demonstrations in the history of St. Thomas took place in 1907, when the New York Central provided a mobile unit, pulled by the celebrated old inter-department engine "A," illustrating the various phases of railway industry. This mobile unit operated over the city's street car tracks, heading a two mile long parade. The above photograph was taken on Talbot street by J. H. Hopkins, a leading photographer of 45 years ago. The Times-Journal is greatly obliged to Harry Martin for the identification of many of those appearing in the picture.

Standing in front of the engine, from the left: Elijah G. Kitchen, in charge of the carpet department in Mickleborough's store, for many years; Sam Wall, conductor on the St. Thomas street railway; Frank L. Brinkman, prominent in the Labor Day committee, later to serve in the City Council for several years as alderman and mayor; James Oddert, a motorman on the street railway; B. Swisher, a conductor on the street railway; George Smith, Wabash Railroad locomotive engineer; Joseph Worden, Michigan Central Railroad locomotive engineer; John MacKenzie, bailiff of Division Court No. 3 and treasurer of the St. Thomas District Trades and La-

bor Council; George E. Wright, M.C.R. conductor, and chairman of the Labor Day Special, as this mobile unit was called; Herbert Sharp, then an M.C.R. brakeman, for so many years secretary of the Brotherhood of Railway Trainmen, who died last year; T. H. (Herb) May, a Pere Marquette Railway brakeman, who was killed overseas while serving with the Canadian forces in the First World War; L. G. (Toughy) Thompson, at that time a Wabash Railroad conductor, later a well-known cigar store proprietor and alderman of St. Thomas, now of Buffalo, and the late Zack Rowland, a charter member and one of the stalwarts of the Trades and Labor Council for over 30 years. In the cab of the little locomotive is the late Fred G. Mills, a Pere Marquette engineer, who lost the sight of one eye several years ago and moved to Sarnia, while beside him is Calvin Lawrence, who was mayor of St. Thomas in 1906 and 1907 but donned his engineer's outfit to operate the Labor Day Special. Later Mr. Lawrence was legislative representative of the Brotherhood of Locomotive Engineers at Ottawa. His son is directly behind him and back of him are a number of M.C.R. shop mechanics and apprentices of 45 years ago. The train consisted of two or three flat cars, each fitted up to represent a shops department or some other phase of railroading. Although not shown in the pic-

ture, Alderman William Stokes, another former mayor of St. Thomas, took a prominent part in that 1907 parade. He was secretary of the Trades and Labor Council and was also marshal of the parade, and was mounted on a spirited horse. Perhaps that accounts for him not being in the picture.



© CSTM Collection - © Collection MSTC

**Photo Number:** STR22838a

**Photographer:** BUILDER

**Location:** MONTREAL, QUE.

**Railway Name:** NEW YORK CENTRAL LINES

**Date:** 1906-08-00

**Subject:** MOTIVE POWER - STEAM LOCO

**Builder Number:** 40497

**Builder Date:** 1906-08-00

**Contract Number:** Q38

**Model:** PACIFIC

**Type:** 4-6-2

**Equipment Number:** 8414

**Collection:** STR





**Photo Number:** STR22871a  
**Photographer:** BUILDER  
**Location:** MONTREAL, QUE.  
**Railway Name:** NEW YORK CENTRAL LINES  
**Date:** 1909-11-00  
**Subject:** MOTIVE POWER - STEAM LOCO  
**Builder Number:** 86242  
**Builder Date:** 1909-11-00  
**Contract Number:** Q109  
**Model:** PACIFIC  
**Type:** 4-6-2  
**Equipment Number:** 8421  
**Collection:** STR



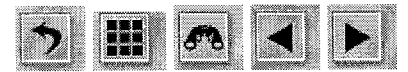
**Photo Number:** STR22872a  
**Photographer:** BUILDER  
**Location:** MONTREAL, QUE.  
**Railway Name:** NEW YORK CENTRAL LINES (M.C.R.R.)  
**Date:** 1909-00-00  
**Subject:** MOTIVE POWER - STEAM LOCO  
**Builder Number:** 46252  
**Builder Date:** 1909-11-00  
**Contract Number:** Q111  
**Model:** SWITCHER  
**Type:** 0-6-0  
**Equipment Number:** 8590  
**Collection:** STR



**Photo Number:** STR22873a  
**Photographer:** BUILDER  
**Location:** MONTREAL, QUE.  
**Railway Name:** NEW YORK CENTRAL LINES (M.C.R.R.)  
**Date:** 1909-00-00  
**Subject:** MOTIVE POWER - STEAM LOCO  
**Builder Number:** 46267  
**Builder Date:** 1909-11-00  
**Contract Number:** Q112  
**Model:** SWITCHER  
**Type:** 0-10-0  
**Equipment Number:** 8790  
**Collection:** STR



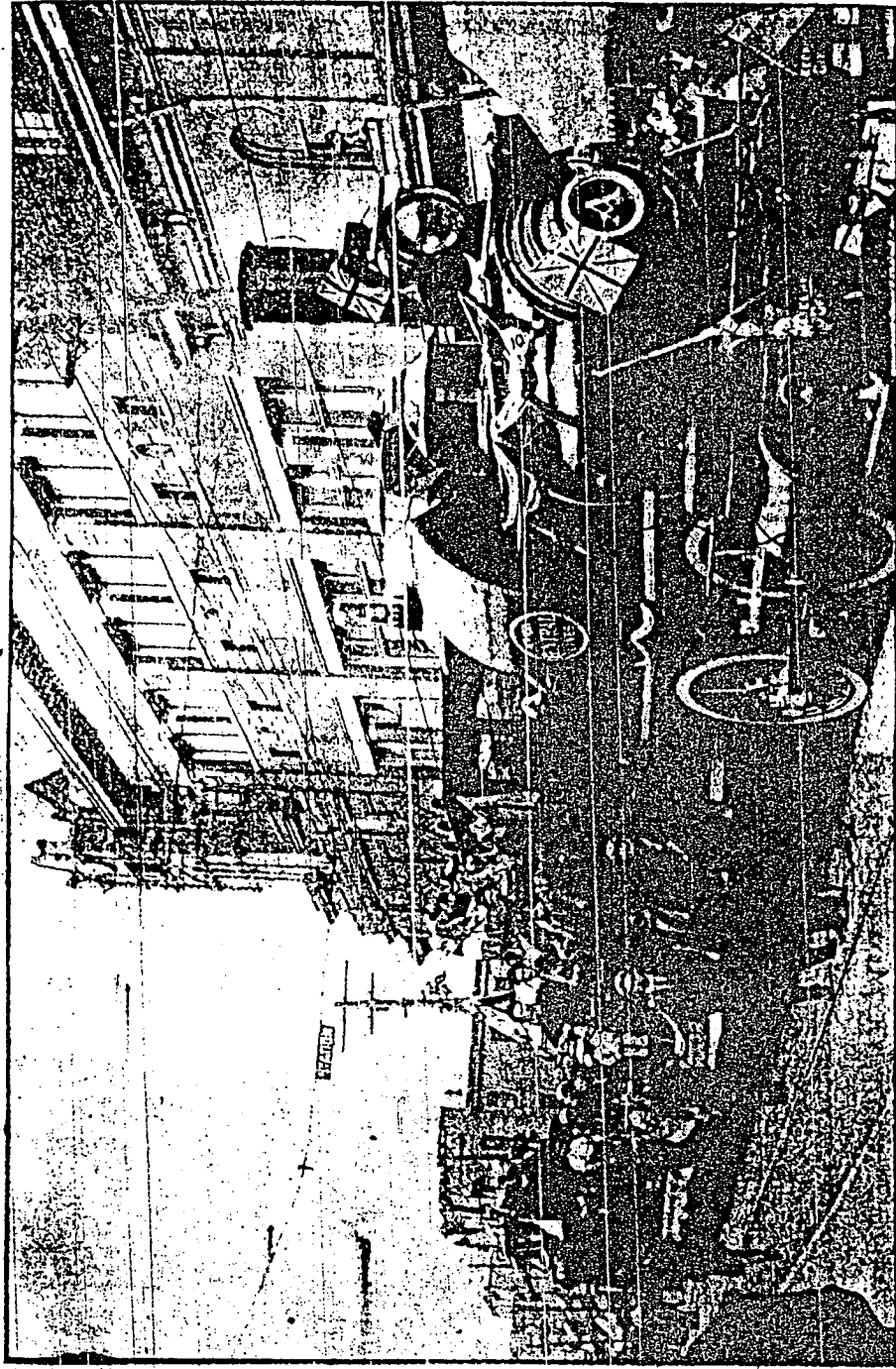
**Photo Number:** STR22875a  
**Photographer:** BUILDER  
**Location:** MONTREAL, QUE.  
**Railway Name:** NEW YORK CENTRAL LINES (M.C.R.R.)  
**Date:** 1910-03-00  
**Subject:** MOTIVE POWER - STEAM LOCO  
**Builder Number:** 47246  
**Builder Date:** 1910-03-00  
**Contract Number:** Q121  
**Model:** CONSOLIDATION  
**Type:** 2-8-0  
**Equipment Number:** 7618  
**Collection:** STR



**Photo Number:** STR22908a  
**Photographer:** BUILDER  
**Location:** MONTREAL, QUE.  
**Railway Name:** NEW YORK CENTRAL LINES (M.C.R.R.)  
**Date:** 1913-01-00  
**Subject:** MOTIVE POWER - STEAM LOCO  
**Builder Number:** 52130  
**Builder Date:** 1913-01-00  
**Contract Number:** Q209  
**Model:** SWITCHER  
**Type:** 0-6-0  
**Equipment Number:** 8597  
**Collection:** STR

# LABOR'S GRAND RALLY AND FIELD THE INDUSTRIAL FORCE THAT M

THE LABOR DAY SPECIAL ON ITS TALBOT STREET TRIP



J. H. Hopkins' photo.  
THE FEATURE OF THE PARADE AS IT APPEARED IN FRONT OF THE ENGINEERS' BUILDING AND  
CITY HALL, WITH THE CREW AND DEMONSTRATION OFFICIALS GROUPED AROUND THE TRAIN.

Sept  
6  
1910

# THE Railway and Marine World

With which are incorporated The Western World and  
The Railway and Shipping World, Established 1890

Devoted to Steam and Electric Railway, Marine, Grain Elevator, Express, Telegraph,  
Telephone and Contractors' interests

OLD SERIES, No. 180.  
NEW SERIES, No. 98.

TORONTO, CANADA, APRIL, 1906,

10 CENTS A COPY.  
\$1 A YEAR.

## DETROIT RIVER TUNNEL.

The plans for the tunnel under the Detroit River, between Detroit, Mich., and Windsor, Ont., to be constructed by the Michigan Central Rd., which operates the Canada Southern Ry., have been completed.

The length of this tunnel, including approaches, will approximate 12,800 ft., or 2.42 miles. The subaqueous portion of the tunnel will be 2,625 ft. long. The other portions are to be as follows:—Easterly open cut, 3,400 ft.; easterly approach tunnel, 3,100 ft.; westerly open cut, 1,540 ft.; westerly approach tunnel, 2,135 ft. The bids for this work were based upon sectional letting, the two open and two tunnel approaches mentioned in the foregoing constituting sections 1, 2, 3 and 4, in the order above named; the subaqueous tunnel constituting section 5, the Windsor shaft section 6, and the Detroit shaft section 7.

The location of the river portion of the tunnel is such as to be substantially tangential to the curve upon which trains enter the station on the Detroit side and to the curve by which trains now turn toward the ferry slip, on the Canadian side. Such curvature as is necessary is located in the approach tunnels on each side, as shown in the general location plan. The summit on the Canadian side is at the western extremity of the new Windsor yards, as on the Detroit side the approach ends in the Detroit yards. On the Windsor side it is proposed to erect a passenger station a short distance east of the summit, and the plans show a suggested connection with the C.P.R. at this point. A connection with the Wabash-G.T.R. line is suggested at Walkerville Jet., from which point also freight cars of the Pere Marquette are taken to Detroit by the C.P.R. The location appears to be the best possible, taking into consideration the various interests that will or may be served.

The feature of engineering difficulty is, of course, the submerged section of the tunnel. For the construction of this main section five plans are presented, to the bidders. For the purpose of reducing hazard, cost, time of construction, length of tunnel and lift of traffic tonnage, and also to widen the field of bidders, the tunnel company offers three designs which dispense with the necessity of using shields for the construction of the subaqueous portion. Design "A" was evolved by W. J. Wilgus, Vice-President of the New York Central, and at the head of the advisory board of engineers, of which H. A. Carson and W. S. Kinnear are the other members. It may be briefly described as a method by which the previous material underlying the river may

be replaced by a watertight material of concrete, placed under water, and through which, without the use of shields, the inner tubes or tunnel proper may be constructed, so as to secure watertightness and continuity of strength, with an absence of high air pressures. This method also dispenses with the use of cofferdams. The progressive stages of this design are:

- (a) The dredging of a trench.
- (b) The depositing in the bottom of this trench so as to form a barrier between the

engineer for a depth of approximately 2 ft.

(e) The placing of saddles, with the aid of blocking and wedges, upon this bed of concrete, upon which forms can be laid. As an alternative method it is suggested that piling can be driven after the trench is excavated, and the piling cut off at a proper height to receive the saddles, so as to dispense with the use of blocking and wedges.

(f) The construction, on shore, of forms consisting of timber and steel in convenient lengths of 50 to 500 ft., to be coupled together in pairs or otherwise, to be floated into position and gradually sunk until they rest on the saddles.

(g) Placing concrete under, around, between and on top of the forms by the bag, Tremie or bucket process, so as entirely to encase the forms. It is optional with the contractor to join adjacent forms under water in such a manner as to secure watertight connections, or to leave an open space between them, to be filled with concrete, to act as a bulkhead, separating the adjacent forms, and to be cut out after the water has been expelled.

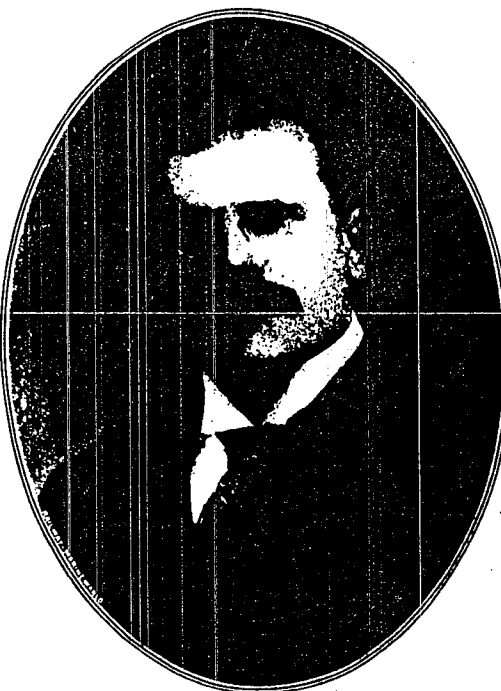
(h) The pumping of the water from the first section after the concrete has had an opportunity thoroughly to set. If the leakage is found to be excessive, the procedure is to use air of sufficient pressure to enable the water-proofing to be perfected and the inner tube or tunnel to be properly constructed.

(i) Should the contractor elect to adopt rolled steel for the forms, they would be constructed with watertight joints in such a manner, that left in the work, they will act as water-proofing to prevent the percolation of water against the exterior of the inner tubes of the tunnel proper. Should the contractor elect to use wooden forms, waterproofing may be placed on the exterior of the forms before they are sunk into position, so that when the forms are removed the water-proofing will remain in place. This method would require the use of air pressure to prevent hydrostatic pressure from distorting the waterproofing.

(j) The construction of the inner tubes of the tunnel proper, after measures have been taken to make all sections thoroughly watertight.

DESIGN "B."

The second design offered by the company, which does not require the use of shields, was proposed by H. A. Carson, of the advisory board of engineers. It is a method by which the inner tubes of the tunnel proper are first built in floats or on dry land, floated and sunk into position on a foundation like that described for the first plan, and joined together by a suitable method, giving continuity of construction and watertightness. In following



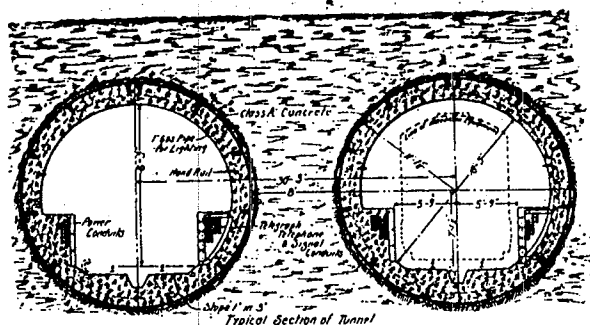
THE HON. L. P. BRODEUR, M.P.  
Minister of Marine and Fisheries

underlying clay and sand and the superimposed concrete, of "two men" stone to the depth of 18 inches; that is, durable, sound stone, ranging in size from quarry spawls to a maximum size that can be handled by two men.

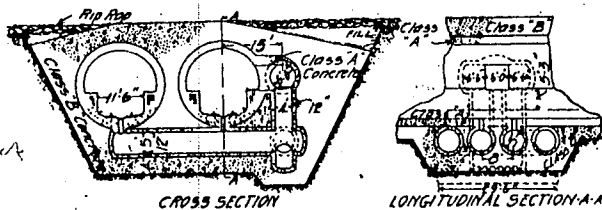
(c) The construction of temporary platforms in accordance with the permits of the United States and Canadian governments, upon which the contractor's machinery, including mixers, etc., may be placed, these platforms to move progressively across the river as the dredging and other work permit.

(d) Depositing of concrete by the Tremie bucket or other process approved by the

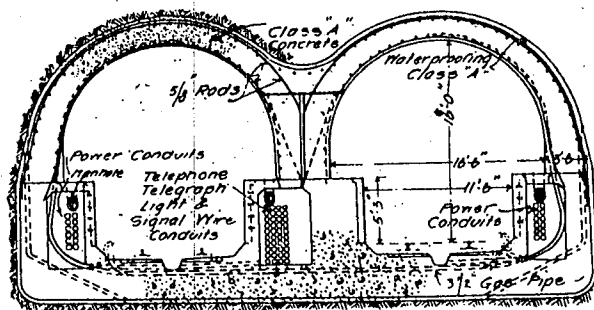




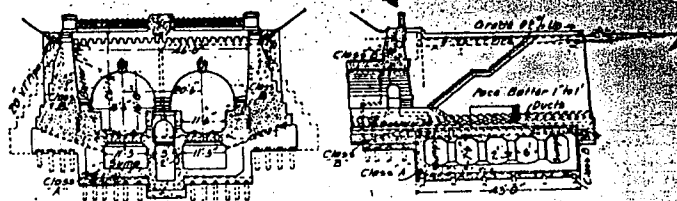
DETROIT RIVER TUNNEL—TYPICAL SECTION, DESIGN "D."



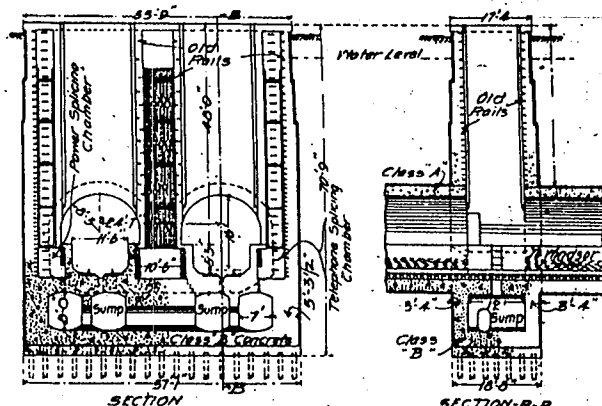
DETROIT RIVER TUNNEL—SUMP UNDER SUBAQUEOUS SECTION.



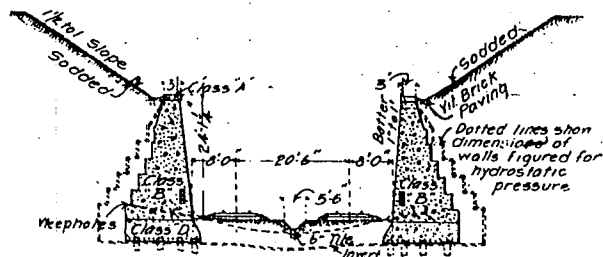
DETROIT RIVER TUNNEL—SOUTH WESTERLY APPROACH.



DETROIT RIVER TUNNEL—WINDSOR PORTAL.



DETROIT RIVER TUNNEL—DETROIT SHAFT.



DETROIT RIVER TUNNEL—RETAINING WALL, EASTERLY APPROACH.

tar pitch" will be used. Felt must be dipped in pitch and weigh not less than 15 lbs. to each 100 square ft. The Class "A" waterproofing will consist of three layers of felt and four layers of coal tar pitch in alternation, each strip or piece of felt to be laid so as to lap well over the previously laid strip.

The Detroit River Tunnel Co. has already completed the excavation of a large portion of the Windsor shaft, and will complete in a similar manner the excavation of the Detroit shaft. This work will be turned over to the contractor, who will complete the excavation and assume maintenance of the temporary work that has been placed.

Answering questions that may arise as to what obstruction to navigation would be occasioned by the trench method of construction proposed, by the plans submitted, it was shown to the satisfaction of the Lake Carriers' Association, at a meeting held in Detroit on Jan. 23, with the Board of United States Engineers appointed by the War Department, that the impairment of the waterway will be immaterial. The total width of the river from harbor line to harbor line is 2,400 ft. It was shown that the tunnel building operations will not obstruct more than 600 ft. of this distance at any one time, leaving the remainder clear to navigation. It was, however, suggested that a patrol boat be maintained to serve as a pilot to passing vessels to indicate to them the particular portion of the channel that at any time was free and unobstructed, and to the maintenance of this boat H. B. Ledyard, Chairman of the Board of Directors, at once assented on behalf of the Michigan Central Rd. It is expected that the actual work in

the river will be completed in eight or nine months.

The cost of the tunnel is estimated at from \$7,000,000 to \$8,000,000, and it is expected to have a capacity for the handling of about 4,000,000 cars per year. The present business of the Michigan Central Rd. amounts to about 400,000 cars annually, and other roads that may be expected to use the tunnel handle about 300,000 cars.

The construction of the tunnel is in the hands of an advisory board of engineers, consisting of W. I. Wilgus, H. A. Carson and W. S. Kinnear, Mr. Kinnear being chief engineer and in direct charge of the work.—Railway Age.

The Executive Council of the Canadian Manufacturers' Association, with a view of building up trade at Canadian ports, has passed a resolution favoring the application of the preferential tariff in favor of British goods only on such as are landed direct at Canadian ports. At present the preferential tariff is applied to goods entering Canada, through U.S. ports as well as to goods coming direct to Canadian ports.

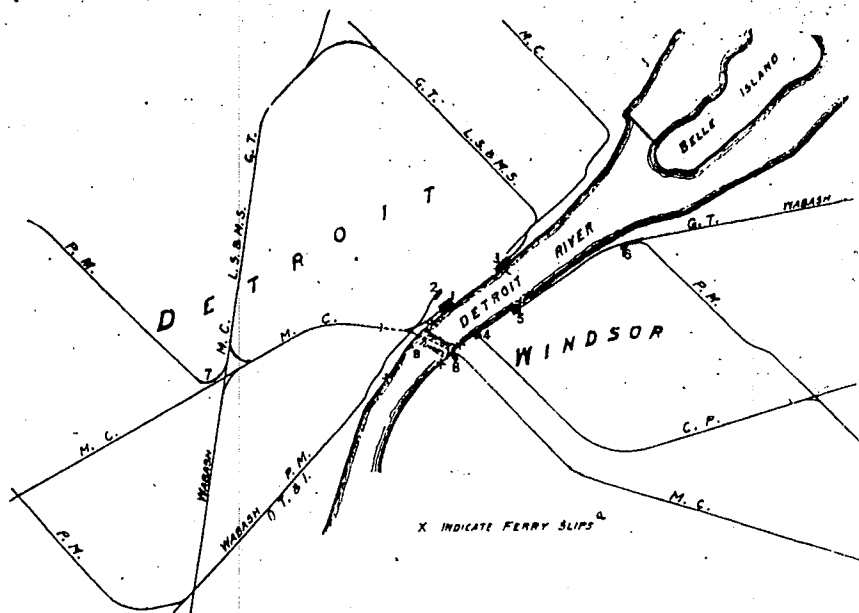
The Shedden Forwarding Co. has been granted a supplemental charter under the Dominion Companies' Act, by which its capital is increased from \$700,000 to \$1,500,000 and its powers have been extended so that it may engage in the manufacture of vehicles of every description; construct and operate grain elevators and warehouses; develop electric and other power; and acquire stock in similar enterprises.

#### C.P.R. Western Officials' Conference.

Following are the opening remarks of W. Whyte, Second Vice-President C.P.R., at the conference of officials, Western Lines, held at Field, B.C., Feb. 12 and 13:—

There is nothing novel about such a meeting as this in territory under my jurisdiction, as I understand that officers have frequently called conferences of those acting with them, and this widening out of the idea was adopted by myself to permit of an exchange of ideas and experience of all the principal officers, and in order that by personal contact with those occupying similar offices and with those in other departments, a better understanding and improvement might result, as well that a more profitable administration of the different departments of the railway might result to the company. The calendar year which has just closed has been, in my experience, by far the most successful in the operation of the Western Lines with respect to the volume of business handled, and particularly in the improvement made in most features of its transportation, increased tonnage and reduction in the expense of transport, as well as the improvement in the passenger service and the handling of package freight, and I think, also, from the fact that there has been less disturbance of the car and the power supplied during the movement of the wheat crop in districts not directly affected by that movement. There has also been an improvement in the carrying out of work authorized by the appropriation and in the building of new lines, much of the work having been





DETROIT RIVER TUNNEL—PLAN SHOWING CONNECTING LINES.

this method great pains would of necessity be taken in joining the sections, so that the joint will not be an element of weakness in the structure, but will be fully as strong as any portion of it. These tubes would then be encased in concrete and protected by backfilling and by riprap.

Design "C" is practically the same as design "A," except that a certain style of steel form and arrangement of reinforcement are prescribed.

Design "D" gives the bidders the option of selecting the well-known shield method of construction. It is pointed out, however, that the necessity of retaining the summits of the tunnel gradients as estimated causes a location of the top of the tunnel for the subaqueous section so close to the river bed as to require artificial filling in order to hold air, the use of which is necessitated by the shield method. Contractors who choose this method must therefore be under the necessity of estimating for the placing of temporary blankets or masses of clay on top of the location of the tunnel, so as to give the necessary thickness between the top of the shield and the water to prevent or reduce the escape of compressed air.

#### CONTRACTOR'S ALTERNATIVE METHOD.

Design "C," before mentioned, gives the contractor the option of submitting supplemental specifications and plans illustrating the type of construction upon which he would prefer to bid, provided that the established gradients on the easterly and westerly approaches shall be the same as the company's plans, namely, 2% equated for curvature on the

westerly approach, and 1 1/4% equated for curvature on the easterly approach. It is further provided that the depth from the surface of the Detroit River to the outer clearance line of the tunnel construction shall not be less than 41 ft. where the depth of water now equals or exceeds that distance. The tunnel company express a strong preference for the fixing of the summits of the easterly and westerly gradients at the points shown upon the company's plans, because the established points are based upon convenience to the track and yard layouts adjacent.

#### GENERAL DESCRIPTION.

The maximum depth of the river at the proposed site of the tunnel is about 45 ft., and it is provided in the specifications, as mentioned elsewhere, that the clearance line of the tube structure shall not be less than 41 ft. below the surface where the depth of water now equals or exceeds that amount. The maximum velocity of current at the time measurements were taken (Aug. 28 to Sept. 5, 1905), was 3.40 ft. per second, and at the bed of the river 1.17 ft. per second.

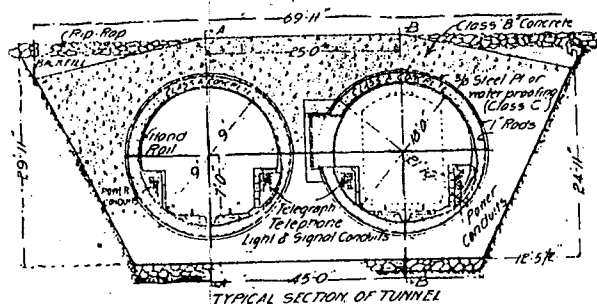
The soil to be excavated consists principally of blue clay, with greater or less admixtures of gravel and sand. In the borings taken on each side of the tunnel site, at intervals of 100 ft. throughout the entire length of subaqueous and approach tunnels, hard pan was struck at about 35 feet below the lowest point in the bed of the river. In case of the use of piling as an additional support for the bottom of the tunnel it is required that piles be driven to refusal.

As shown by the accompanying engravings of typical sections of the tunnel, it is provided that the interior diameter of the tube shall be 18 ft., giving a height above top of rail of 10 ft. Power conduits will be located on the outer side of the tube interior, and telegraph, telephone, light and signal conduits upon the inner side with a clearance of 11 ft. 6 in. between. In all of the various possible designs submitted for the consideration of contractors provision is made for the liberal use of concrete. Design "A" provides for filling the tunnel trench to a depth of 5 feet with Class B concrete above the shell of the tunnel tube, which is itself of Class A concrete, 2 ft. in thickness, reinforced with 1-in. steel longitudinal rods, spaced 14 in. centre to centre, and inner and outer circumferential rods of the same size, spaced 6 in. centre to centre. In the main features of construction the other designs submitted, with the exception of the shield method, do not differ essentially. Design "B" provides for a filling of concrete up to only a short distance above the centre line of the tubes, the balance being backfilling, and a protection of riprap, while Design "C" provides for outer and inner shells of 1-in. steel, the outer shell being supported by rings of 10-in. I-beams of 30-pound section, spaced 4 ft. centre to centre.

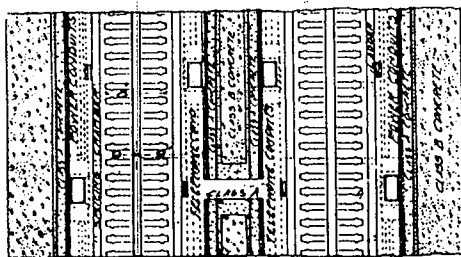
Design "D" provides for a tube, built up of cast iron rings composed of segmental sections 2 ft. 6 in. in width and 6 ft. 3.1414 in. in length on the outer face, with flanges 11 in. in width, and 1 1/4 in. thick on the inner edge, and two intermediate brackets of the same thickness, supporting the longitudinal flanges of each section. Each section is tapped for a 1 1/4 in. pipe for grouting.

The specifications for the tunnel structure indicate that much attention is to be given to the quality of Portland cement used, to its mixing and the method of application, in order to insure the greatest degree of strength and permanency.

It is the purpose of the tunnel company to secure structures the interiors of which shall be permanently free from moisture or discoloration due to the percolation of water, oils or other liquids from outside sources, by use of a continuous, flexible waterproof sheet, surrounding the exterior of the structure. Coal tar of the grade known as "straight run coal

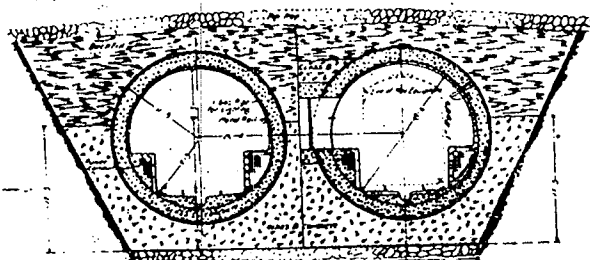


TYPICAL SECTION OF TUNNEL

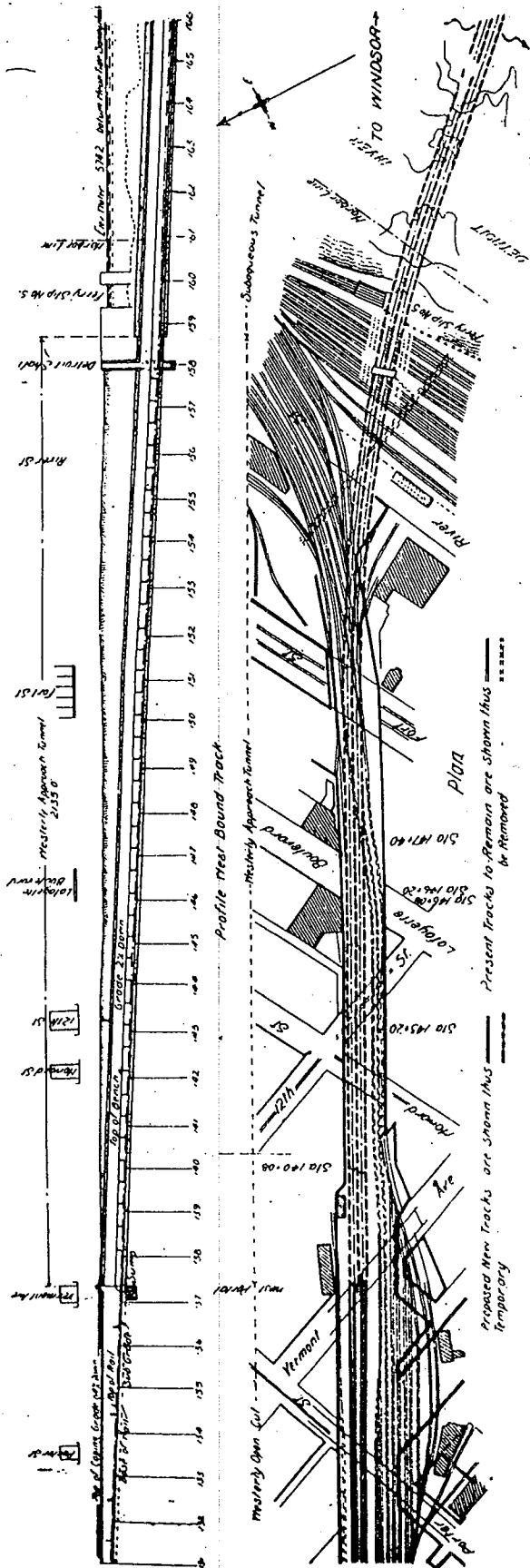


PLAN

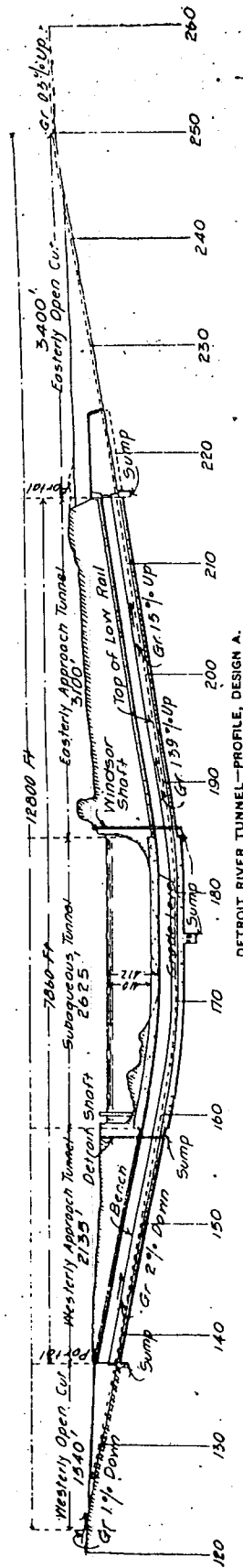
TYPICAL SECTION AND PLAN, DESIGN "A."



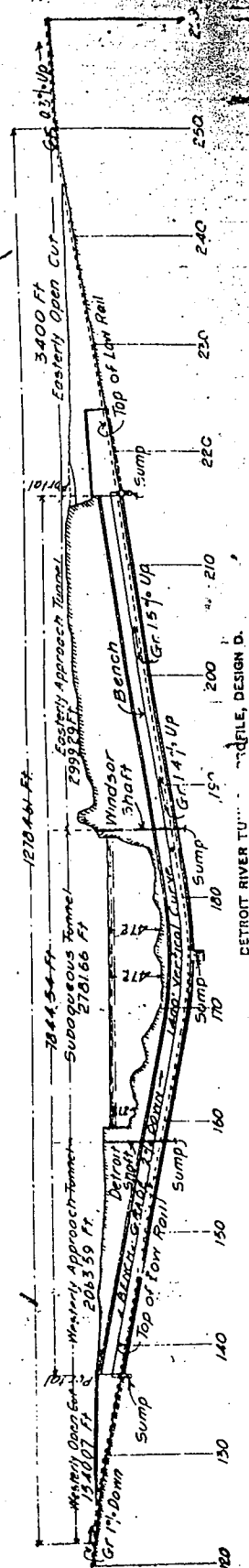
TYPICAL SECTION, DESIGN "B."



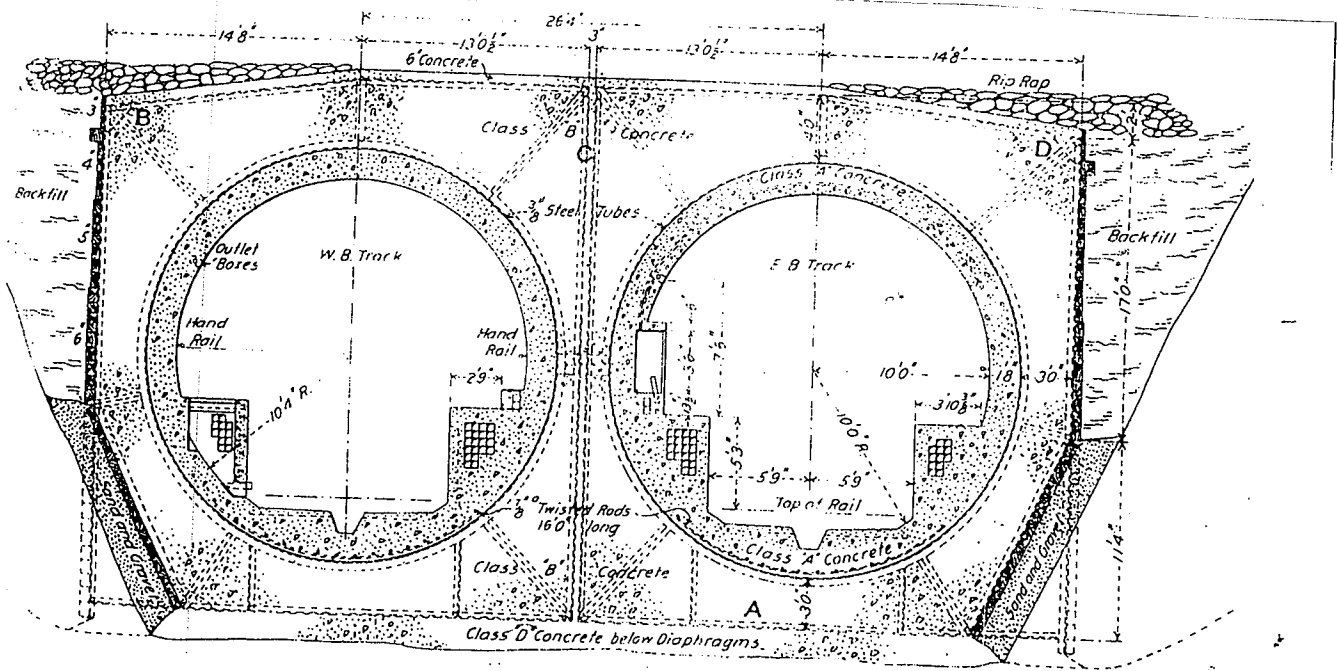
DETROIT RIVER TUNNEL—PROFILE AND PLAN OF WESTERLY APPROACH



DETROIT RIVER TUNNEL—PROFILE, DESIGN A.



DETROIT RIVER TUNNEL—PROFILE, DESIGN D.



Section of completed Detroit River tunnel.

A large crowd of people came out to view the first passenger train to go through the Michigan Central Detroit River Tunnel on Sunday October 16th 1910. The passenger train No. 23 passed through without any incident. The train arrived in Windsor at 11:55 and arrived at Detroit at 12:20. The Wolverine at 4:40 PM. was the first eastbound train to run through the tunnel.

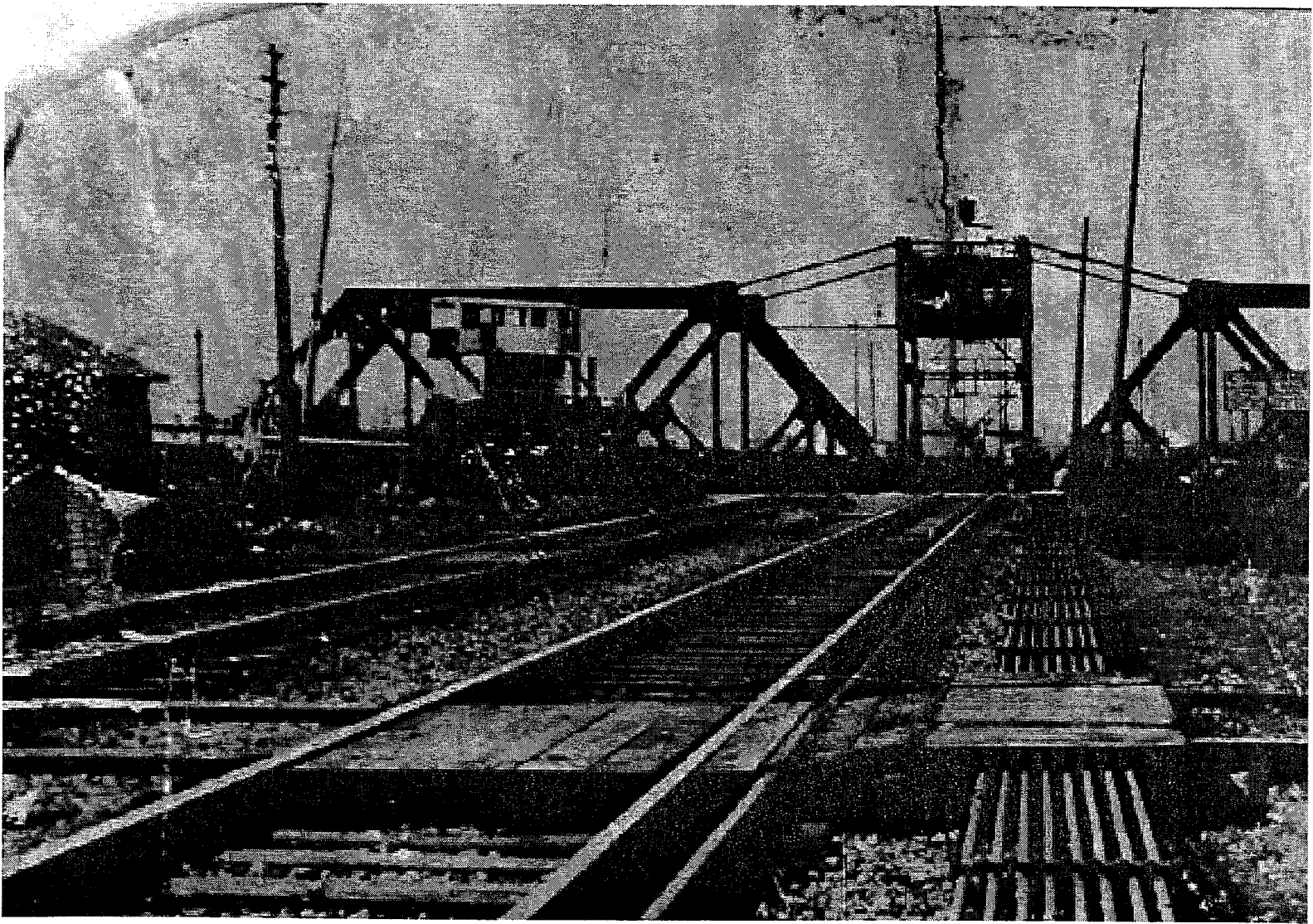
## NEW WELLAND STATION

On Saturday morning January 16th, 1909 a brand new station was opened for business, by the station agent J.D. Payne at Welland, to service both the Michigan Central and the Toronto Hamilton and Buffalo Railways. The station was described as being as up to date as the old station was behind the times. The floors were of hardwood, the ceiling of oak, heated by steam, complete with electric lights. The gentlemen's waiting room held twenty-eight men and the ladies waiting room could hold twenty persons.

## WELLAND CANAL BRIDGE

The Michigan Central Railway undertook the construction in the fall of 1910, with the closing of the navigation season, a double track center swing bridge over the Welland Canal at Welland. The total length of the Baltimore Truss span was 260 feet. The complete weight was 1,000 tons, and it was swung by electric power. Temporary trestles were erected around the side of the old bridge to carry the railroad traffic during the construction of the new bridge.

The new double track swing bridge over the canal was opened for traffic April 7th, 1911.



## FAST TRAINS

May 21st, 1910 Michigan Central engines 8421 and 8426 pulling a Brotherhood of Locomotive Engineers special train set a new world record of a mile a minute.

The eastbound Detrouiter, the brand new Michigan Central fast limited train on Saturday night, April 22nd, 1911 reached the St Thomas station right on schedule and was just about to pull out of the station, when a Pere Marquette freight locomotive and train was moving out of the passenger train's way when it threw a driving wheel tire at the east end of the yard, and this then blocked both east and west-bound tracks. It took 46 minutes before the Pere Marquette train could clear the mainline and the Detrouiter could leave. The schedule called for a mile a minute speed. The engine was 8423 a big Pacific, and the Engineer W. Clark, aided by his Fireman Roy Palmerston made the train cover the 118 miles in 101 minutes. when the train arrived at Buffalo it was still late but it had made up thirteen minutes.

The Michigan Central on Saturday night, July 22nd, 1911, ran a special train to New York City, for the convenience of horsemen returning from a horse convention held at Detroit. The train travelled at a speed faster than the Detrouiter. The train was nine cars and was drawn by engines 8426 and 8420 between Windsor and St Thomas, and east from st Thomas engines 8421 and 8432 pulled the train. The train ran at close to seventy miles an hour over the Canada Division.

Two special fast trains ran over the Canada Division May 18th 1913, for the benefit of a Brotherhood of Trainmen excursion from Detroit to Niagara Falls.

The first train was ten cars pulled by 8428 on the west end, and 8436 on the east end. It travelled the 227 miles in 259 minutes. The second train was drawn by 8437 on the west end, and 8421 on the east end. It's train was only seven cars.

Several hot boxes delayed the train so that a record run wasn't made that day.



BUFFALO

AUGUST 18, 1910

A Michigan Central engine had crossed the International Bridge from Fort Erie to deliver a train of interchange freight cars to the New York Central Railway at Black Rock, New York on August 18th, 1910. With the cars delivered the light engine proceeded to return to Canada. In the cab of the engine were Engineer Forke, Fireman Alfred Thomas and Conductor Simon Putney. At 4:47 when New York Central passenger train No. 52, from Suspension Bridge-Niagara Falls to Buffalo crashed into the light engine right in the yards at Black Rock. The conductor and the fireman were injured in the collision.

### TEDDY ROOSEVELT

Colonel Theodore Roosevelt, the ex-President of the United States, was a passenger on the Wolverine Express through St Thomas on Sunday evening, February 12th, 1911. Colonel Roosevelt travelled in a party with Senator Smith and occupied a regular space on a Pullman sleeping car. The party was returning from a speaking engagement to the Michigan Republicans at Grand Rapids, Michigan.

"Teddy" was getting away with his supper in the dining car when the train stopped at St Thomas. A few of the locals on the platform were able to manage a curious glimpse at the ex-President. The local paper reported that one said, " he is as homely as photographers have painted him, they declare this hasn't impaired his ability to get away with a good square meal."

Roosevelt would return through St Thomas again on March 29th, 1913 and May 19th, 1916.

## WINDSOR STATION

April 25th, 1911 saw the formal opening of the beautiful new Michigan central station in the south end of Windsor; adjacent to the tunnel entrance to the Detroit River Tunnel. Besides a large main waiting room, and a men's smoking room, there was a ladies and gentlemen's customs and immigration detention waiting rooms complete with beds. The first station master was D. J. MacQueen. On the west side of the new station was an elaborate covered driveway leading to the main entrance to the waiting room, and on the east side of the tracks another waiting room for the convenience of west-bound passengers.

## ST THOMAS      1909-1914

The St Thomas station had been a landmark since 1873, and while it would remain; Michigan Central improvements started in the period 1909 to 1914 would change the St Thomas yards for many decades.

In the summer of 1909 the Ross Street subway was constructed under the Michigan Central tracks at the throat of the west end of the yard.

### ROUNDHOUSE

Plans were drawn in early 1910 for a massive new roundhouse' It contained 40 stalls. It had an outside diameter of 428 feet. the lengths of the stalls were 95 feet, except the stalls that had drop-pits and they were 113 feet long. The turntable was 85 feet long. The roundhouse was heated by steam, and a modern washout system was installed. It was built of brick and concrete with wooden posts and a timber roof. It was completed in 1912 on a vacant piece of property between the old shops and First Avenue.

### NEW SHOPS

On March 28th 1913 a young man arrived at St Thomas. W.B. Wulfe was the Superintendent and Engineer in Chief for the Arnold Company had instructions to build the new Michigan Central machine and erecting shop, a new powerhouse, a 124 foot smokestack and a 700 foot tunnel. The New Machine Shop was built on the site of the old roundhouse.

The New Shop was a large modern structure 176 feet wide and 293 feet long. its 51,568 square feet contained 13 locomotive erecting pits. There were eighty different machines in the shop. There were two huge travelling cranes in the shop, one that could lift 150 tons, an entire locomotive, while a smaller 10 ton crane could lift the large locomotive parts. The shop had three bays, the erecting bay, the individual motor

driven machine shop and the third a machine shop full of machines driven by belts and pulleys.

The chimney was 125 feet high. The new powerhouse which incorporated the old powerhouse was a 90 by 100 foot building. A concrete tunnel 700 feet long ran from the powerhouse to the new locomotive shop under the old locomotive shop and the transfer table. This tunnel contained compressed air lines, steam heat pipes and electric wires going to the shop and the transfer table.

The old shops took on the new role as the boiler shop. The new shop complex was completed March 28th, 1914.

## WINDSOR ROUNDHOUSE

In 1909 a twenty stall roundhouse was constructed at Windsor and it was expanded with an additional 9 concrete stalls in 1927.

## M. C. R.'s New Quarter Million Dollar Shops Nearly Completed

### THE NEW M. C. R. SHOPS

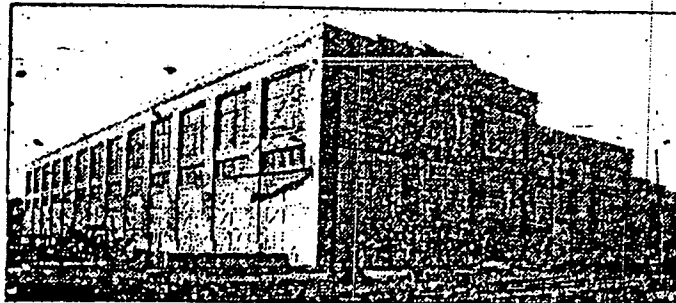


Photo by Hopkins.

This Modern Building is 201 Feet Long, 170 Feet Wide and Has Accommodation for Thirteen Engine-Erecting Pits and Much Modern Machinery.

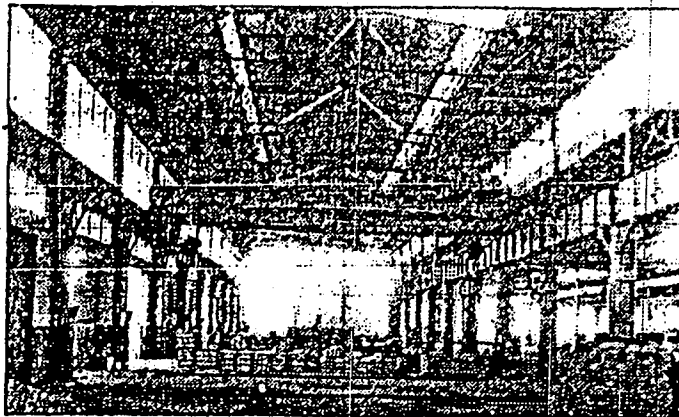


Photo by Hopkins.

The Building Furnishes a Floor Space of 31,508 Square Feet and the Character of Construction Will Permit of the Installation of Traveling Cranes, Which Will Lift the Largest Locomotive Around at Ease.

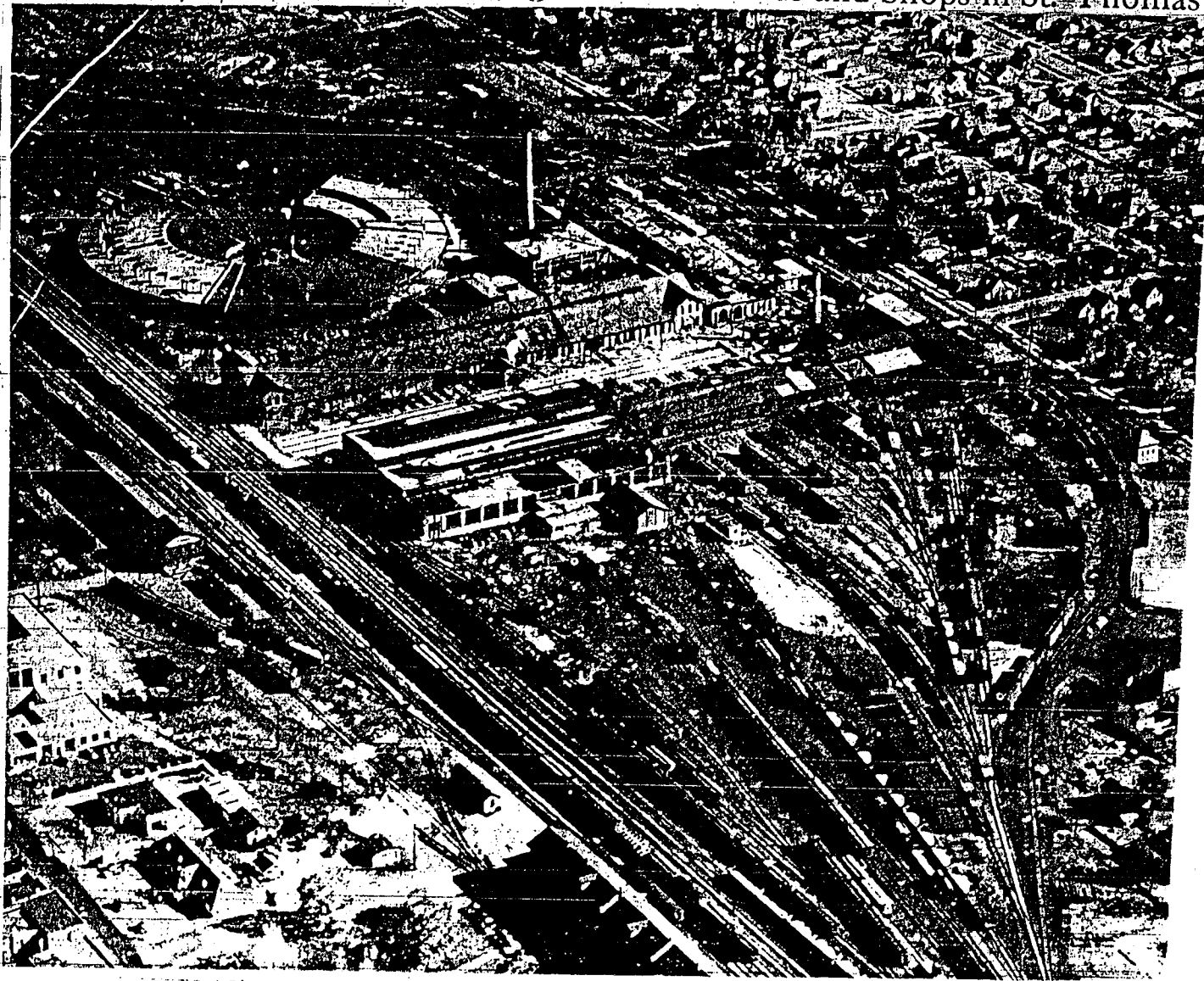
# The St. Thomas Times-Journal

INCORPORATING THE ST. THOMAS DAILY TIMES AND THE ST. THOMAS JOURNAL

1918

ST. THOMAS, ONTARIO, SATURDAY, NOVEMBER 22, 1917

## Aerial Photograph of the Michigan Central Yards and Shops in St. Thomas



IT would be difficult to take an aerial photograph of St. Thomas without getting railroad yards and buildings in it. Any aerial photograph of the south-east section of St. Thomas would necessarily include some of the city's largest railroad, the Michigan Central (New York Central System).

The above aerial photograph taken by Ron Nelson of London and supplied through Solberg Photographic Service of St. Thomas is a particularly comprehensive one of the Michigan Central or New York Central shops and yards. It shows how really extensive is this industry and it also provides evidence of the age of the industry, which started as the Canada Southern.

The large circular building in the upper left part of the photograph is the 41 pit roundhouse, built in 1916, and still one of the largest in Ontario. Directly in front of the roundhouse is the original general repair shop, a sturdy brick building, erected in 1872. At the north end of this building is the divisional master mechanic's department. In front of the original shop is the big transfer table, connected right through to the roundhouse while to the west of the transfer table and pretty well in the centre of the photograph is the new shop building, built in 1913. At the south end of the new shop building is the old freight car repair shop, built also in 1872, while joined to it on the extreme south

end and paralleling Wellington street, is the old wooden shop building in which passenger coaches were repaired for many years. It is now generally used for car repair purposes but, if plans carry through, is likely to be dismantled in the not too distant future, with a new and modern shop to be built.

To the south of the roundhouse the tall brick chimney makes the big powerhouse, built in 1913, easy to pick out in this aerial photograph.

Along the left side of the photograph, about in the centre of the building, the M.C.R. freight shed building shows plainly. Little changed since it was built in 1872. Above the lower frame of the picture, almost in the centre, may be seen the east half of the long red brick depot and general divisional office building, which has served for well over 60 years.

Railwaymen familiar with this lay-out will no doubt find much to interest them in this photograph. They'll "spot" the relatively small building east of the new shops, where all the acetylene for the division is produced, the white residue showing to the east of the building. They will also locate the water tower, between the old shop building and the roundhouse and a dozen and one other buildings and services.

In the upper right-hand corner of the photograph is shown a section of the residential district south and east of Wellington street.

## RIDGETOWN

MAY 31, 1911

Michigan Central 8422 was a K-80h class Montreal Locomotive Works 4-6-2 Pacific type locomotive, built in 1909. The engine in the early morning of May 31st 1911 was on No. 9 westbound. In the cab of the 8422 were Engineer Stephen Quinlan and Fireman Russell Oakes. The passenger train, at 3:50 AM. was bearing down on Ridgetown, Ontario. They saw the signal east of Ridgetown set at danger. Engineer Quinlan saw the signal set against him. He decreased the speed of the train and further as he entered the block; the home signal was set against, the train was slowing, when Quinlan then observed that the approaching semaphore was set at clear. Probably surprised at this situation, he then gave the locomotive steam now to accelerate on a clear track. The 8422 suddenly left the rails and turned over into the ditch and dragging three baggage cars with it. Engineer Quinlan was crushed in the cab and Fireman Oakes was imprisoned in the cab and was scalded.

Then the disturbing news was discovered that fishplates and spikes had all been removed from two rails on the section of track. When the rails had been separated the electrical bond for the track signalling system had automatically set the first and second signals to danger but the last signal was on the other side of the break and was still set as clear. This is why there would have been confusion in the cab. The automatic signals had worked for it had forced the train to slow down. The spikes and the nut and bolts from the fish-plates were left beside the track as well as two crowbars and a wrench. The train had been deliberately wrecked. An inquest was held July 6th when a verdict was given that stated that the train No. was wrecked by a rail being removed by person or persons unknown and that the train had been running at a speed faster than 15 miles per hour. There had been labour problems with the track labourers in the prior month and one local was viewed with suspicion.

ST THOMAS

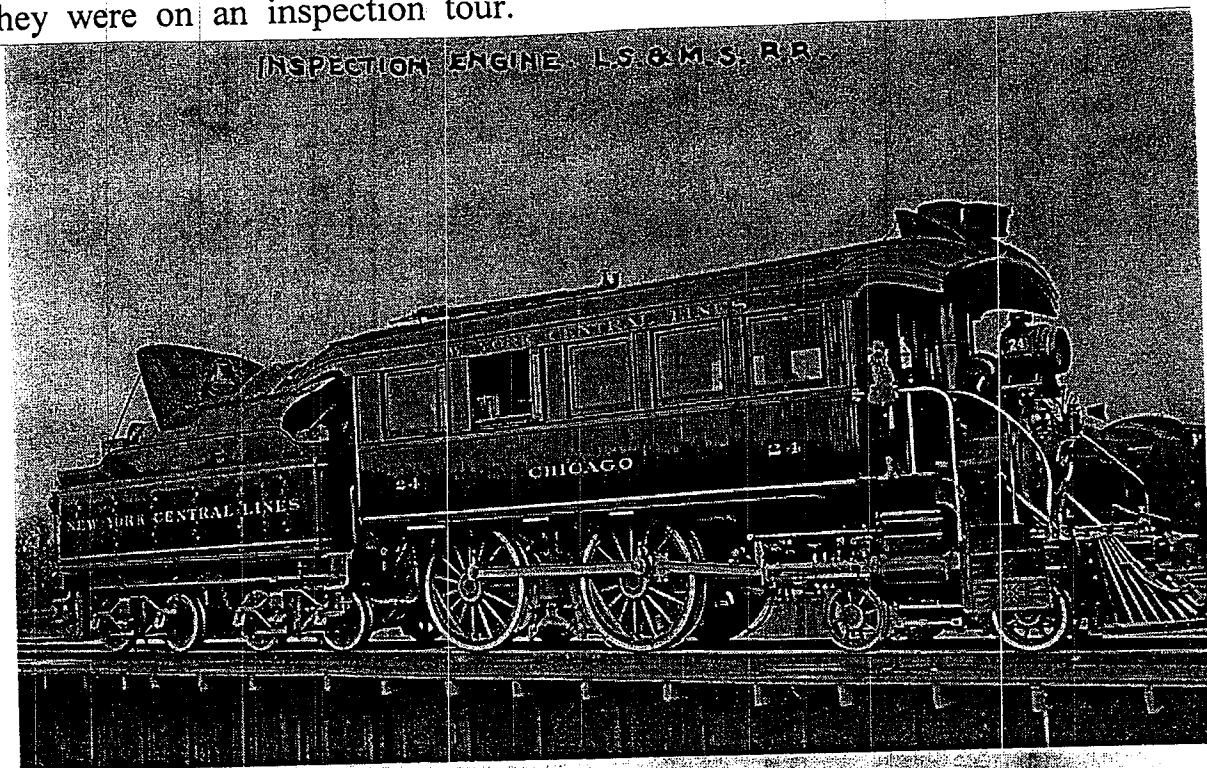
MAY 14, 1912

As a result of a yard engine bumping a little too severely into a dining car in the Michigan Central St Thomas yards on Wednesday, May 14th, 1912 eight men, three passengers and five employees ended up in the hospital suffering from slight injuries. received when they were thrown about the cars. The accident occurred just after the No. 13 Express train had pulled into the yards. The yard engine had backed onto the train, picked up three day coaches and a Pullman sleeping car and shunted them over to the track where the dining car was standing. The intention was to place the dining car in the center of the train, just back of the sleeping car. The Engineer of the yard engine misjudged the distance to the dining car so that the coaches slammed with force into the dining car. The employees in the dining car and passengers in the Pullman were thrown about. While the injuries were not serious the railway felt that it was advisable to visit the hospital. The interior of the dining car was a shambles. It would be unsuitable for service, its trip cancelled and the passengers were served meals in the station dining room.



## INSPECTION TRAIN

AUGUST 2, 1912. A New York Central inspection train passed over the Canadian Division of the Michigan Central on its way to Chicago. The train was pulled by the unique inspection engine No. 24 with two private cars in charge of Conductor Maxwell. The Engineer of the inspection engine was Engineer Kohen, who could operate over all the N.Y.C. System Lines without a pilot. On board were N.Y.C. Vice-Presidents Smith and Barnet; General Superintendent S. W. Brown, Division Superintendent H. Shearer, and Master Mechanic R. R. Webb. Engine 24 was one of a group of little engines with almost a salon or private car built over top of a boiler that would allow railroad officials with a forward vision of the railway when they were on an inspection tour.



BUXTON

JUNE 15, 1913

Travelling at the rate of sixty miles per hour on a straight piece of track Michigan Central train No. 4 left the rails a mile east of Buxton about three o'clock on the morning of June 15th, 1913. The train was pulled by two 8429 and 8426, both 1910 Montreal Locomotive Works 4-6-2 K-80 pacific's. The Engineers were Edward Wilson and Jack McCormick both of St Thomas. The train was made up of eleven cars; a United States Mail car, a buffet car, seven Pullman s and two day coaches. The train was thirty minutes late and was making up time over the straight raceway, when suddenly without warning the lead engine left the rails and the other engine and eight cars left the track. All the locomotives and cars stayed on the roadbed except the buffet car that tumbled down the embankment. The train crew and 135 passengers were all given a rough ride over the rails. Only the Pullman porter a Mr Hamilton received cuts and bruises.

## CANADIAN PACIFIC

The Canadian Pacific on June first, 1914 inaugurated a brand new through train that ran complete between Montreal and Chicago in conjunction with the Michigan Central Railway. The new Montreal to Chicago train was named the "Canadian" and the eastbound was named the "American". It was the first direct service for the CPR to Detroit and Chicago. In the past the CPR had sent a car over to the Wabash by car-ferry to Detroit. The make-up of the "Canadian" was an attractive mahogany solid vestibule train of eight coaches, with nine cars the limit, so that it was able to hold to its fast 24 hour schedule between Montreal and Chicago. The first westbound train consisted of a all-steel baggage car, first and second class day coaches, Toronto sleeper, Montreal sleeper, Tourist sleeper, Dining car, and Observation -Compartment car. The Canadian Pacific turned their train over to the Michigan Central at Windsor where the CPR engines were cut off and M.C.R. electric engines pulled the CPR train through the tunnel to Detroit and the M.C.R. supplied an engine for the run to Chicago. It would follow closely the Wolverine. The train left Montreal at 8:55 AM., arrive Detroit 11:25 PM. and arrive Chicago at 7:30 AM. Returning it left Chicago at 9:30 AM., arrive Detroit 3:45 PM. arrive Toronto 11:30 PM. and the next morning arrive at Montreal at 8:55 AM.

BUXTON

MAY 11, 1914

Four coaches on the Wolverine jumped the rails at Buxton on Thursday morning May 11th, 1914. The train was in charge of Conductor David Stinson of Detroit and engineer Sam Whitwam of St Thomas. The train was pulled by engine 8421, a 1909 Montreal 4-6-2 Pacific type. When word was received in St Thomas it was thought that the scene would be terrible and a special relief train was dispatched with three doctors on board. While the cars were derailed, there were no injuries, and the first portion of the train was uncoupled, and continued westward to Detroit. All the passengers from the derailed coaches were loaded into the forward cars. The Wolverine had fourteen cars. It was running ten minutes late, trying to make up the lost time, when the four rear coaches had split the switch, at a half mile east of North Buxton station. The coaches had remained upright, despite the fact that the trucks, had been ripped from under the cars..

## END OF LONDON SERVICE

After twenty-eight years the Michigan Central had been running into London over London and Port Stanley Railway, in May 1915, M. C. R. President H. B. Ledyard received a notification for termination of the agreement for running rights over the L&PS from the City of London. Sir Adam Beck had made plans to cancel agreements with both the Pere Marquette and the Michigan Central and to electrify the L&PS and make it an independent railway. Discussions were held between the new L&PS and the Michigan Central to obtain running rights into London. The Michigan Central took the position that they wanted to still run their steam locomotives over the L&PS. The L&PS refused this position that M.C.R. engines would wear the rails more than the new electric locomotives. The running rights agreement expired on June 30th, 1915. on July 3rd the new London and Port Stanley began the new independent electric service. Part of the Michigan Central right of way in London was leased to the L&PS as part of the later's London Terminal. At the beginning the Grand Trunk and M.C.R. were hostile; with the Michigan Central routing freight over to the Canadian Pacific at St Thomas and was routed the long way to Woodstock and then back to London.

The following year things had cooled down and the L&PS built a spur to the back of the Michigan Central St Thomas station to facilitate the close connections between the two railroads. Further for a brief period an L&PS electric locomotive hauled a Pullman sleeping car from London at night to St Thomas for interchange to the Michigan Central trains.

## WINDSOR

APRIL 3, 1917

Engineer Sam Whitwam had a marvelous escape from death in a wreck in the Michigan Central yards on Thursday April 3th, 1917. He was the engineer of No. 31 the Fast Mail Express. Up ahead a yard engine, under the care of Engineer Percy Sinclair, came through a switch thrown by mistake, that put the them on the mainline. Sinclair looked up at the signal semaphore and saw that it was up, and that he was in danger. Before the engine could back up and clear the mainline, Whitwam's fast mail came around the curve and bore down on the lone yard engine. Whitwam stuck to his post, reversing the engine and applying the air-brakes. His Fireman and the crew of the yard engine all jumped down the embankment. There was a crash and the yard engine was side-swiped. The yard engine was overturned and almost thrown down the steep embankment at the north side of the tracks. The express locomotive left the rails and ploughed deep into the roadbed. The steel baggage and mail cars were piled across the railway with one car hurled down the embankment. Several of the wooden coaches were smashed to kindling wood.

It took the better part of the day to clear the damage. Trains arriving in Windsor were sent around by " the hump" Thursday night and therefore little damage was caused by the wreck. Not a person was injured in the collision.

ALVINSTON

JANUARY 15, 1918

Mid January 1918 a massive snow blizzard struck the East Coast, and the entire northeastern railway system was clogged, strangled and closed. Snow plow trains were attempting to clear mainlines and branchlines. A severe coal shortage and below zero temperatures made every mile of railway track important.

On the St Clair Branch to Courtright a passenger train had been stalled by hard snow in a deep cut between Alvinston and Walker's for a second day. St Thomas assembled a snowplow extra to go up the branch and clean the railway and rescue the train. Three Michigan Central F-81 Class 4-6-0's were assembled at the St Thomas roundhouse the morning of January 15th. The three engines were old 1892 Schenectady ten-wheelers. The snowplow train consisted of a big Russel snowplow, three locomotives, a baggage car and a boarding car. The plow extra managed to rescue the stalled passenger train and get it back to Walker's. The plow train then returned to clearing the cut that had stalled the passenger.

The plow, propelled by the three big engines rammed at the clogged railroad cut with full steam up. The snow in the cut was now old packed solid snow. The snowplow failed, it stopped and with three engines pushing hard and slow, the plow was demolished to kindling. The three engines were thrown from the track badly damaged. One of the engines had even been turned completely around. Two section men were killed in this snow collision, Fred Tavener in the plow, and Ed. Cunningham standing in the cab of the first locomotive.

# TWO MEN KILLED WHEN RAIL FLOW HIT SNOWBANK





OCTOBER 22, 1918.

WINDSOR

Some excitement was caused at the Michigan Central roundhouse in the morning of October 22nd, 1918 when Pacific 8431 was seen coming down the roundhouse lead from the cinder pit with no one in the cab and it crashed down into the turntable pit. When the engine plunged down into the pit the front trucks broke through the cement, the weight of the engine behind causing the truck to break off. The front of the engine passed over the pilot truck and stopped in the pit, leaving only the trailing truck on the track. This left the cab high in the air and caused the engine and tender to become disconnected.

Attempts were made to pull the engine out of the pit with another engine proved futile. It was decided that the derrick was necessary. It was lucky that that the turntable was able to swing sufficiently to enable the removal of the freight and passenger locomotives from the roundhouse to fulfill the requirements of the days operations. The derrick was then run out on to the turntable, and it took all day, but the front end of the locomotive was lifted, and the engine was finally rescued.

The cause of the runaway was beleived to be that when the engine was left standing at the cinder pit the cylinder cocks were not opened and that waste steam in the cylinders was sufficient to start the engine in motion.

## MONSTER MIKADO ENGINES

Ten new monster freight locomotives of the monster Mikado type had been installed on the Canadian Division of the Michigan Central on November 15th, 1918, a Windsor newspaper reported. These engines while huge in comparison to the 7600 class 2-8-0's they replaced they were six years old. They had been built in 1912 and 1913 by Alco-Brooks with 63" drivers. They came with Mechanical stokers, electric headlights and power reverse gears .Many would have Elesco feed water heaters installed.

## CANADIAN NIAGARA BRIDGE COMPANY

The coal blockades in the severe winters of both 1917 and 1918 was a stab at the Canadian railway system when coal could not be moved out of the Niagara frontier. The railway lines around Buffalo were choked.

Both the Michigan Central and the Toronto Hamilton and Buffalo Railways had two points of entry into and out of the United States. The first was the Niagara Cantilever Bridge at Niagara Falls and the second was the Grand Trunk Railway's International Bridge at Fort Erie.

The Cantilever Bridge was now getting old and would soon be replaced. Sixteen passenger trains and thirty freight trains crossed the border there every day on the double track bridge. The single track International Bridge had 98 passenger trains and 90 freight trains per day. The New York Central yards were taxed way beyond there capacity. Black Rock yard in Buffalo had a capacity for 1000 cars and 2300 cars passed through there every day. The New York Central east of Buffalo had three to four routes that could take excess traffic, the West Shore and the Rome Watertown and Ogdensburg, from its four track main line. Every NYC passenger or box of freight came through the bottleneck of Buffalo and Niagara Falls.

In 1918 a plan on a huge scale was put forward, a third crossing of the Niagara River right in the middle, north of Buffalo straight across from Welland across the Niagara to Grand Island, New York then a second crossing of the Niagara to Tonawanda New York and a direct line to Rochester.

The Dominion Parliament incorporated the Canadian Niagara Bridge Company in 1918 to build a railway from near Welland to a point on the International Boundary on the Niagara River. The Canadian principals were the Canadian Pacific and the Toronto Hamilton and Buffalo Railways. The President was Edward W. Beatty, President of the Canadian Pacific Railway and the Vice President was A. H. Smith, President of the New York Central. The Chief Engineer was R. L. Latham the Chief Engineer of the

TH&B. The first press reports stated that it would be the Toronto Hamilton and Buffalo Railway that would build the Canadian portion of the six mile railway and the bridge to Grand Island.

Surveys were made in the summer of 1919, and by December a crew of men were drilling into the rock of the river for making tests for the bridge foundations. By 1920 all of the land had been acquired which included a large plot of land on Grand Island where the freight classification yard would be located.

The American Niagara Bridge Company was incorporated in New York State to build a railway and a bridge from the NYC and Lehigh Valley Railroad junction at Tonawanda across the Niagara River to Grand Island, New York and then to a connection with the Canadian Niagara Bridge Company at the border point. The President of the American company was A. H. Smith; the President of the New York Central, and J. N. Beckley, of the Toronto Hamilton and Buffalo, was a Vice-President. The whole project would involve 22 miles of new track and the construction of two long bridges. Eleven miles would be the NYC, and under ten miles would be built and owned by the Toronto Hamilton and Buffalo Railway.

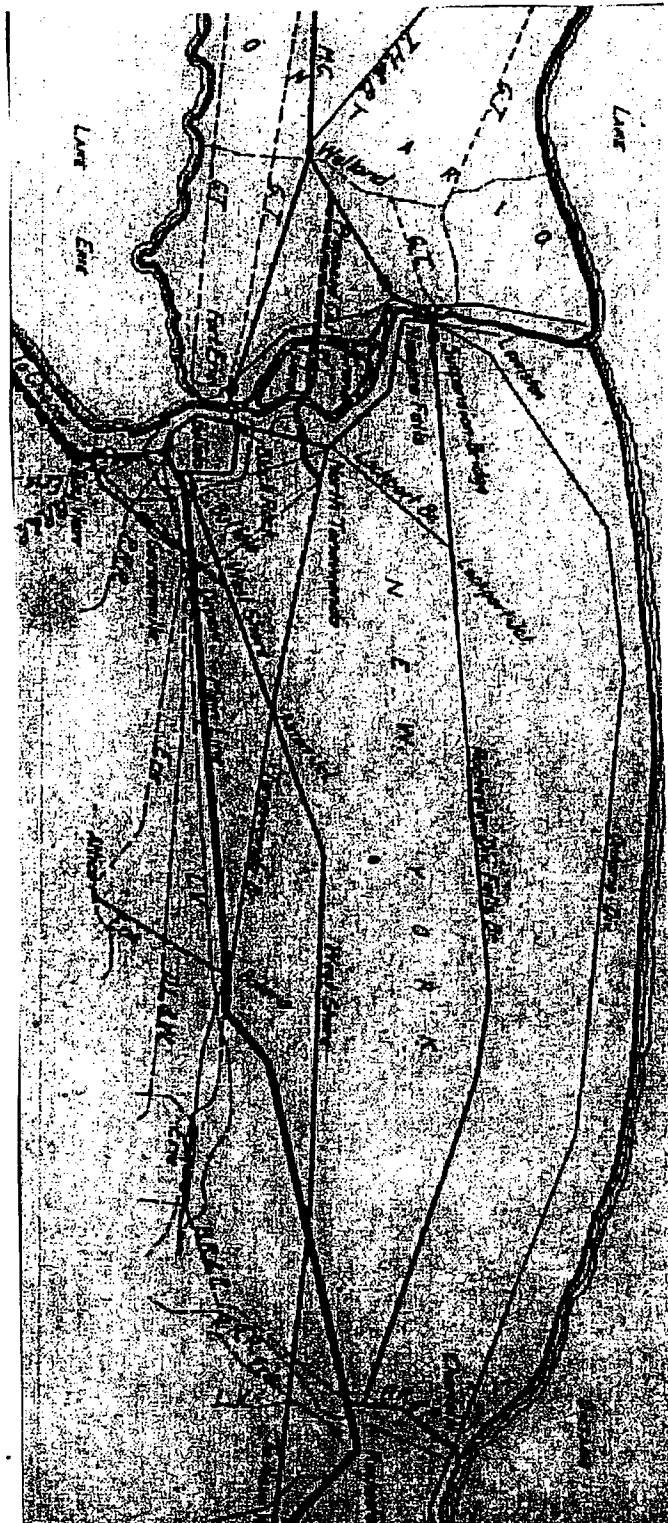
The plan was to split off the Michigan Central's Welland to Niagara Falls line, 3.15 miles north-east of Welland. The new cut-off would travel in a straight line through Crowland and Willoughby Townships 8.50 miles to Black Creek on the Niagara River near Black Creek then cross the Chippewa Channel of the Niagara River on a fifteen span bridge. The first 12 spans were to be semi-through Warren type spans, each 160 feet long, 2 through truss spans 205 feet long and a vertical lift bridge 196 feet long. The entire railway and the bridges were to be double-tracked. The bridge would have a roadway and a walk path on the side.

On Grand island a massive freight yard was planned with a capacity for 10,000 freight cars. The detailed plans had a huge hump yard, with a 10 track receiving yard that could hold 110 cars per track. The classification yard would be 32 tracks capable of 50 to 100 cars on each

track. A further 10 tracks would round out the freight capacity. Two modern roundhouses with stalls for 32 engines in each roundhouse would care for the steam engines.

From this massive yard freight trains could head east and would cross the Tonawanda Channel of the Niagara River on another eight span through Warren type truss bridge and another 190 foot vertical lift bridge to Tonawanda, New York. The low grade line would run over the New York Central's Tonawanda Branch to Akron Junction and then turn on to the NYC West Shore line to head directly to Rochester where it would connect with the four track main iron of the New York Central heading east.

The engineering plans were drawn, drilling had established the nature of the Niagara River as a foundation, and a lot of land was purchased, almost half of Grand Island. Then it was forgotten.



## THE CANADIAN PILOT

The New York Central Railway System during most of the steam locomotive era in the Twentieth Century utilizes a simple step or footboard pilot on both its steam switchers and its heavy freight locomotives in the United States. The footboard pilot was allowed by the ICC and in all the states that the railway operated in the United States, but in Canada this was not the case. The M.C.R. and N.Y.C. Canadian freight steam locomotives were very unique in that all the road freight engines had a defined cowcatcher or pilot made of either wood or old boiler tubes that came out at the front and protected the middle of the track.

This Canadian Pilot was a result of a judgement made December 20th, 1920 by Assistant Chief Commissioner S. J. McLean of the Board of Railway Commissioners after the NYC made an application for a modification of general order 102 in which the NYC asked to permit its freight locomotives that ran into Canada to use the step or footboard pilot. In effect, the NYC asked the Board that the type of construction used on switch locomotives be allowed on road freight locomotives. When the NYC argued that the ICC allowed the footboard pilot, the Board counted that the footboard pilot had developed in the US from the silence of said regulations, and stated that the ICC had neither bothered to approve or decline authorization for the use of footboard pilots. The NYC had to adapt to "the Canadian conditions" the Board stated in the interest of safety. The ruling required that the NYC and MCR had to have specific road engines that operated into Canada, not only the Michigan Central Lines but also to its lines into Montreal and Ottawa.

The Canadian Pilot would remain until the very last day of steam locomotive operation in 1956.

be paid in Canadian funds, it would practically mean that goods originating in the U.S., exported through Canadian ports, would pay a less freight rate than if exported from American ports. This would be discriminatory as against U.S. railways and would break up parity of export rates between Canadian and U.S. railways now in existence. This, in my judgment, would be a positive disadvantage to the business of the country as a whole.

It was contended by some interests at our conferences, that the rate of exchange should be fixed weekly rather than fortnightly, but there again it is a question of average. The railways may have a slight advantage under one set of circumstances, and the reverse may be the case under others; but, if it is found in working out the scheme that injustice results on account of the fortnightly arrangements, the Board reserves the right to change it any time it may think proper. While these arrangements are not perfect, yet, in my opinion, it is the best solution of the problem so far advanced by any person, and I feel sure it will grant a great measure of relief to Canadian business interests. The companies will be required to make monthly returns to this Board, showing the amount of surcharge collected, and, if it is found that any change is necessary, either as to dates of arranging the same, or the percentage upon which the whole scheme is based, the Board will make whatever corrections may to it seem necessary. An order should, therefore, issue in the terms of the above proposal, the railway companies to have the privilege of filing the same as a tariff, effective on Jan. 22 instant.

This judgment was concurred in by Assistant Chief Commissioner McLean, Deputy Chief Commissioner Nantel and Commissioners Boyce and Rutherford.

On Jan. 14 the Board passed general order 326 ordering railway companies to file tariffs effective Jan. 22, to put the foregoing judgment in effect and to make monthly returns showing the amount of surcharges collected.

The Canadian Freight Association, on Jan. 15, issued a tariff, no. 16, special local and joint freight tariff of regulations governing exchange surcharge on international shipments of freight traffic, other than coal and coke, effective Jan. 22.

#### Minimum Requirements for Establishment of Agency Stations.

The Railway Association of Canada made the following application to the Board of Railway Commissioners:—

The Railway Association of Canada, acting on behalf of the several railway companies subject to the Board's jurisdiction and operating in Western Can-

That by reason of these facts, not only do the minima fixed in the said order furnish inadequate revenue to justify the establishment of an agency, in view of the present increased cost, but they represent a smaller volume of traffic than at the date of issue of the above mentioned order, and, therefore, necessitate the appointment of agents in many cases in which under the original conditions in view of the altered conditions above indicated and accepting the principles upon which the original order was based, the minimum amount which should be fixed for the appointment of a permanent agent should be increased to at least \$25,000, of which \$4,000 should represent inward traffic.

#### Pilots Must be Used on N.Y.C.R. Locomotives in Canada.

Assistant Chief Commissioner S. J. McLean, of the Board of Railway Commissioners, gave the following judgment Dec. 20, 1920, which was concurred in by Deputy Chief Commissioner Nantel and Commissioners Boyce and Rutherford:—Application is made by the New York Central Rd. for a modification in the Board's regulations, as set out in general order 102, said modification being asked for so as to permit its freight locomotives running in Canada to use a step construction instead of having a pilot. In effect, it is asked that a type of construction, which is used in switching service in terminals, may be allowed to be used in road service. It is alleged that the step has every advantage that a pilot has, and it is further alleged that the use of steps in lieu of pilots on the freight locomotives is allowed by the Interstate Commerce Commission's rules. This is apparently developed by inference from the silence of said regulations, as specific words of authorization were not referred to at the hearing. It is set out by the applicant that the "step" equipment is not objected to by any of the public utilities commissions of the states through which the railway operates. It is represented that there would be difficulties in operation if a pilot is required as to the portion of the pilot in Canada. It is contended, in journey in Canada. It is contended, in this connection, that in respect of the short mileage of the St. Lawrence & Adirondack Ry., in connection with the operations of the railway into Montreal, it would be impossible to have one portion of the rule in effect in Canada and another portion in the United States. It is stated that there are no facilities on the Canadian portion of the journey which will permit of the pilot being put on, and it is also set out that no such facilities are available at or adjacent to the International Boundary. It is admitted that a different situation exists

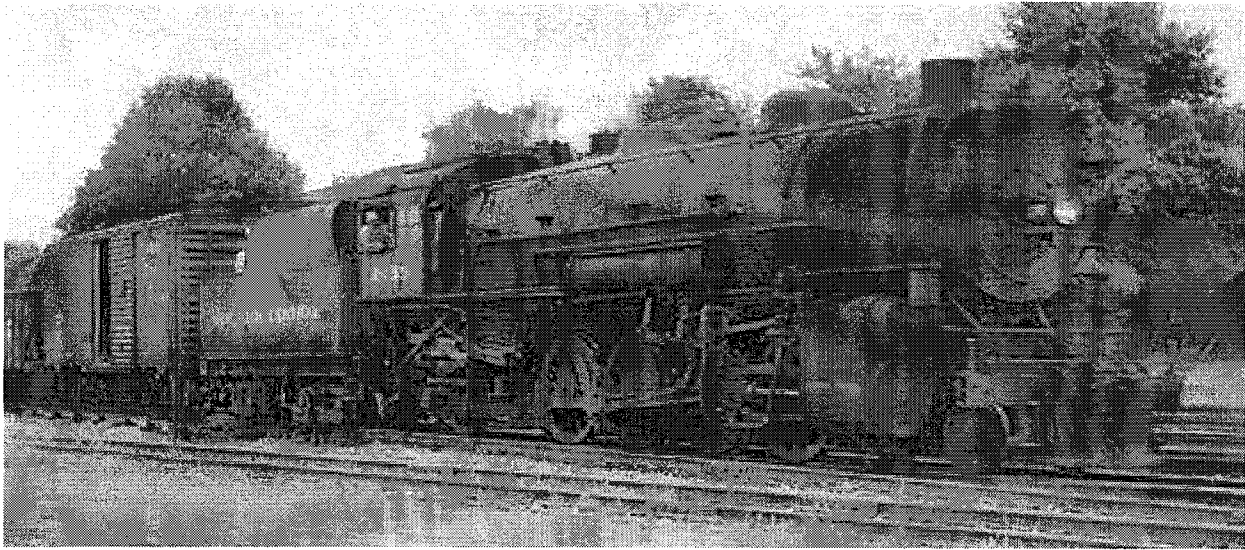
and the movement concerned merely incidental to a longer movement in the U.S., the Board has, in a spirit of comity, always been willing to approach the matter, not from the standpoint of mere liberalism, but to consider whether the regulations aforesaid are in substantial harmony with the Board's regulations on the same subject, and thereafter to permit operation under the U.S. regulations where the particular facts justify so doing. But, to my mind, the situation involved in the present application is entirely different from that set out in the preceding paragraph. While a question of safety is involved, the Board is asked to allow a departure from its regulations, and to allow the substitution thereof of a practice depending entirely on tolerance. Having in view Canadian conditions, and the careful consideration given before the regulations concerned were adopted, I am of the opinion that the application should be refused.

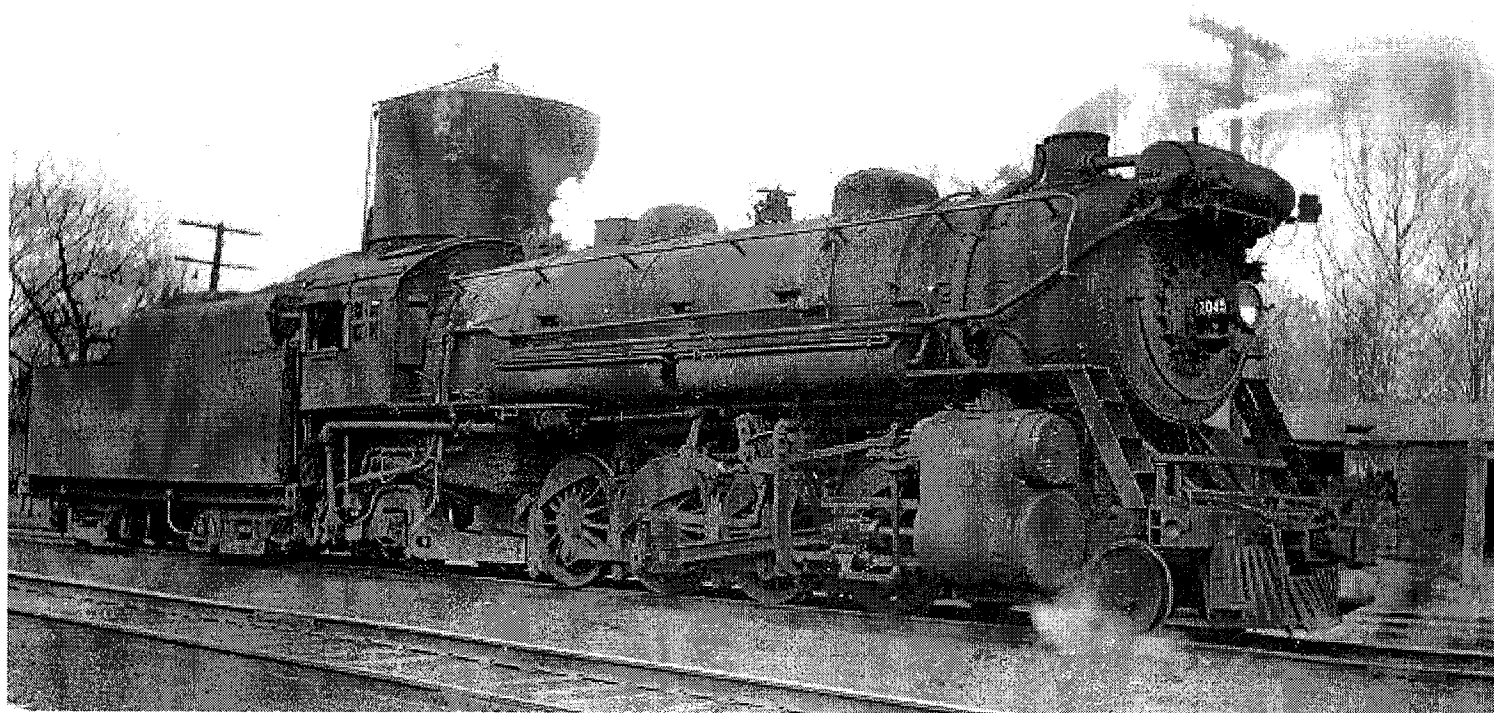
#### Dominion Government Urged to Authorize Rolling Stock Orders.

The following telegram was sent by the Chairman and Secretary of the Canadian Manufacturers' Association, Montreal branch, to the Minister of Railways at Ottawa, Dec. 30:—"In view of unemployment situation at present acute, particularly in large industrial centers of Canada, the Montreal Branch of the Canadian Manufacturers' Association would strongly urge your Government to place orders immediately for large quantities of rolling stock, which it is understood are required by the Canadian National Railways. We would point out that such action by your Government would do much to relieve the stress and strain of unemployment, and we believe that your Government will view with favor the suggestion that any work that is possible to contract for immediately instead of awaiting the spring, should be carried out."

**John Murphy's Salary.**—The Associated Federal Employees at Ottawa recently made a number of charges against the Civil Service Commission's Board of Hearing, one of the cases mentioned being stated as follows:—"John Murphy, brother of Hon. Charles Murphy, M.P., is an electrical engineer in the Railways and Canals Department. His appeal was heard by the Board, and his salary was raised to \$5,000. This was approved by the Civil Service Commission, and was about to go to the Privy Council when one member of the Board said that the Council would never pass the item, so his salary was reduced on the strength of this, although the evidence had been heard, and both the Board and the Commission had decided that he was worth \$5,000." The Board of Hearing, in reply to this charge, said: "The Board feels that the insinuation implied in this feels that the Board was unfavor-







WELLAND

MARCH 19, 1923

A Pere Marquette westbound freight train plowed into the rear of another westbound Michigan Central that was coming out of a siding at Welland, early in the morning of March 19th, 1923. Four freight cars were smashed and a large amount of the roadbed was torn up. Thomas Smalidown, a brakeman of the Pere Marquette was injured.

February, 1928.

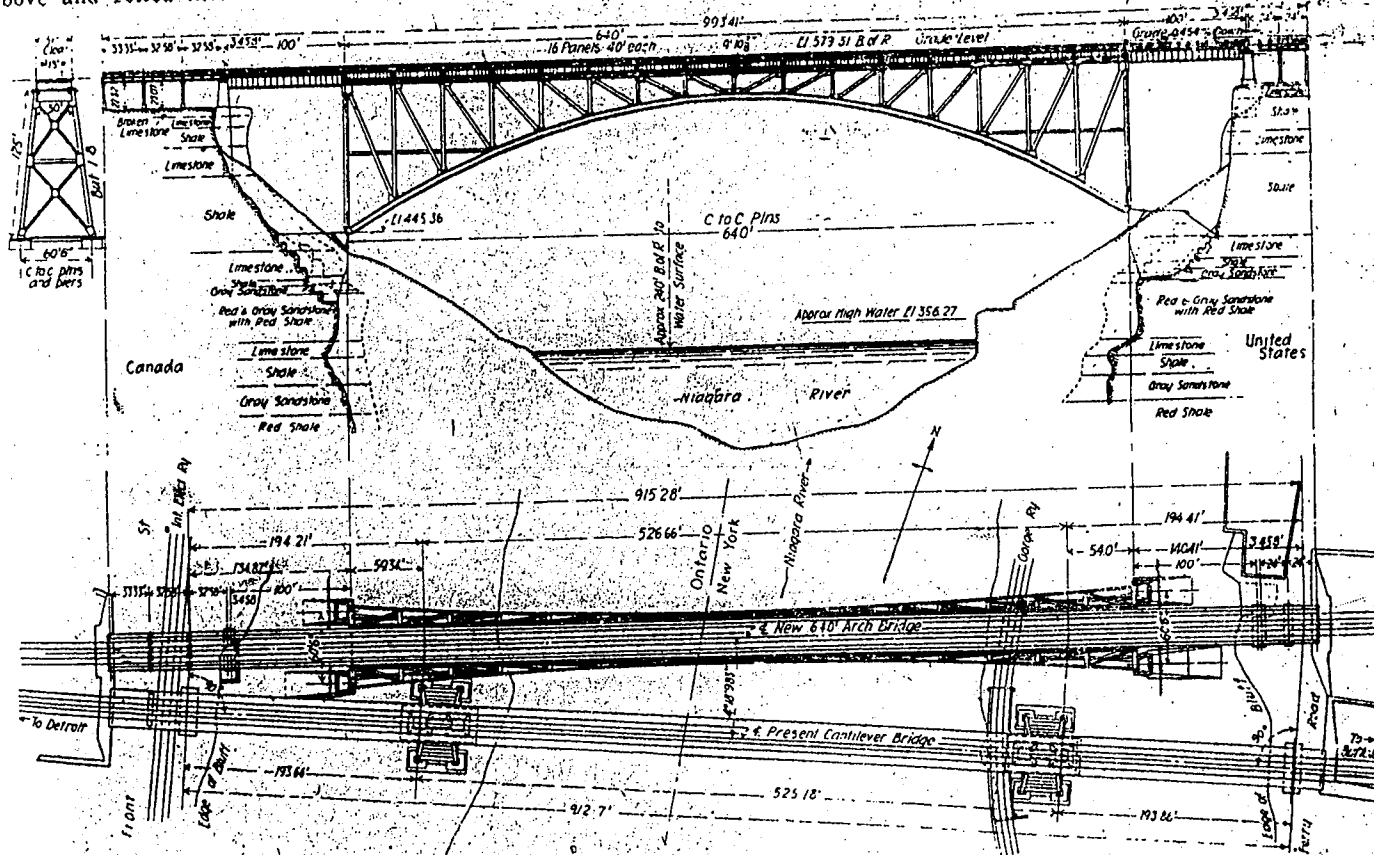
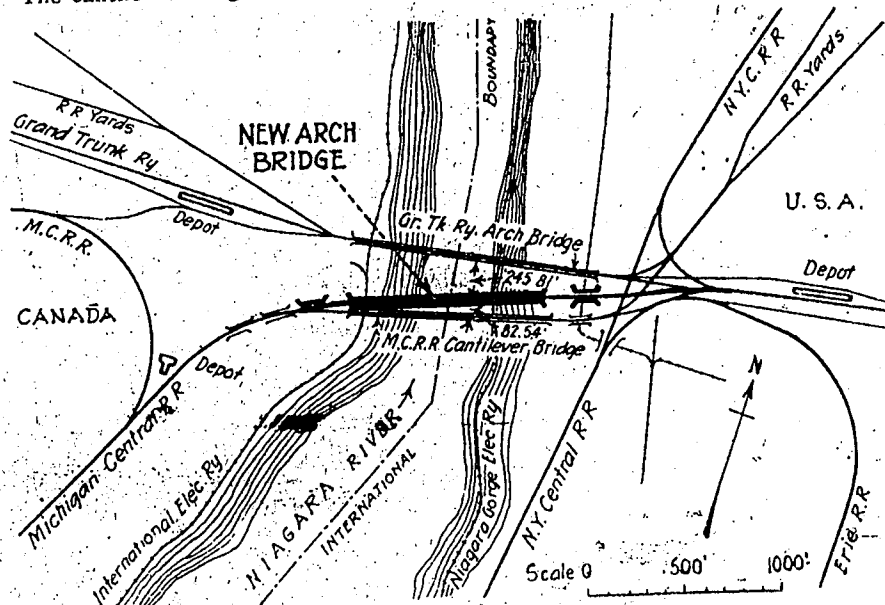
**New Bridge Over Niagara River for Michigan Central Railroad.**

The cantilever bridge carrying the Michigan Central Rd. tracks over the Niagara River, between Niagara Falls, Ont., and Niagara Falls, N.Y., will, within the next two years, be replaced by a new double track steel arch bridge, of the spandrel braced type, located immediately north of the present bridge, which was built in 1883 from designs by C. C. Schneider, and was a notable structure for its time. It spans a chasm 850 ft. wide and 210 ft. deep to the surface of the water. The river at that point, which is above the whirlpool rapids, is 425 ft. wide, and the velocity of the current, at the center, is 16½ miles an hour. The total length of the bridge is 910 ft. The cantilever towers are spaced 495 ft. center to center; the river arms are 175 ft. long; the anchor arm 195 ft. long; and the suspended span is 120 ft. long. The tower piers are located very close to the river's edge. No borings were made for the examination of the foundations for these, but it was expected that solid rock would be found about at the elevation of the top of the water. The excavation proved, however, that the solid rock was not to be found at this point, but that the formation consisted of very large irregular shaped pieces of rock, closely bonded and interlocked with each other, which in earlier times had broken off from the cliffs above and rolled into the river. As it

Later core borings have shown that the solid rock is 196 ft. below the ground at this point and that the over-lying material consists of large rock, intermingled with smaller boulders and clay.

The cantilever bridge was designed to

the old trusses. This increased the live load capacity of the bridge about 50%, making it equivalent to a Cooper's E 35 loading and this was as much as it was practicable to strengthen it. The maximum loading permitted on the bridge at



was impracticable to excavate much below the level of the water, it was decided to place a heavy bed of concrete on top of this rock, as a foundation for the tower piers, which are 38 ft. high and are built of Queenston limestone; backed by Black Rock stone. While more or less cracked, they are still in fair condition.

carry on each track a live load consisting of two 66-ton locomotives, followed by 2,000 lb. per lineal foot, corresponding to a Cooper's E 23 loading. The bridge was strengthened in 1900, by adding a center truss and tower post, resting on new center piers, and also by increasing the sections of some of the members of

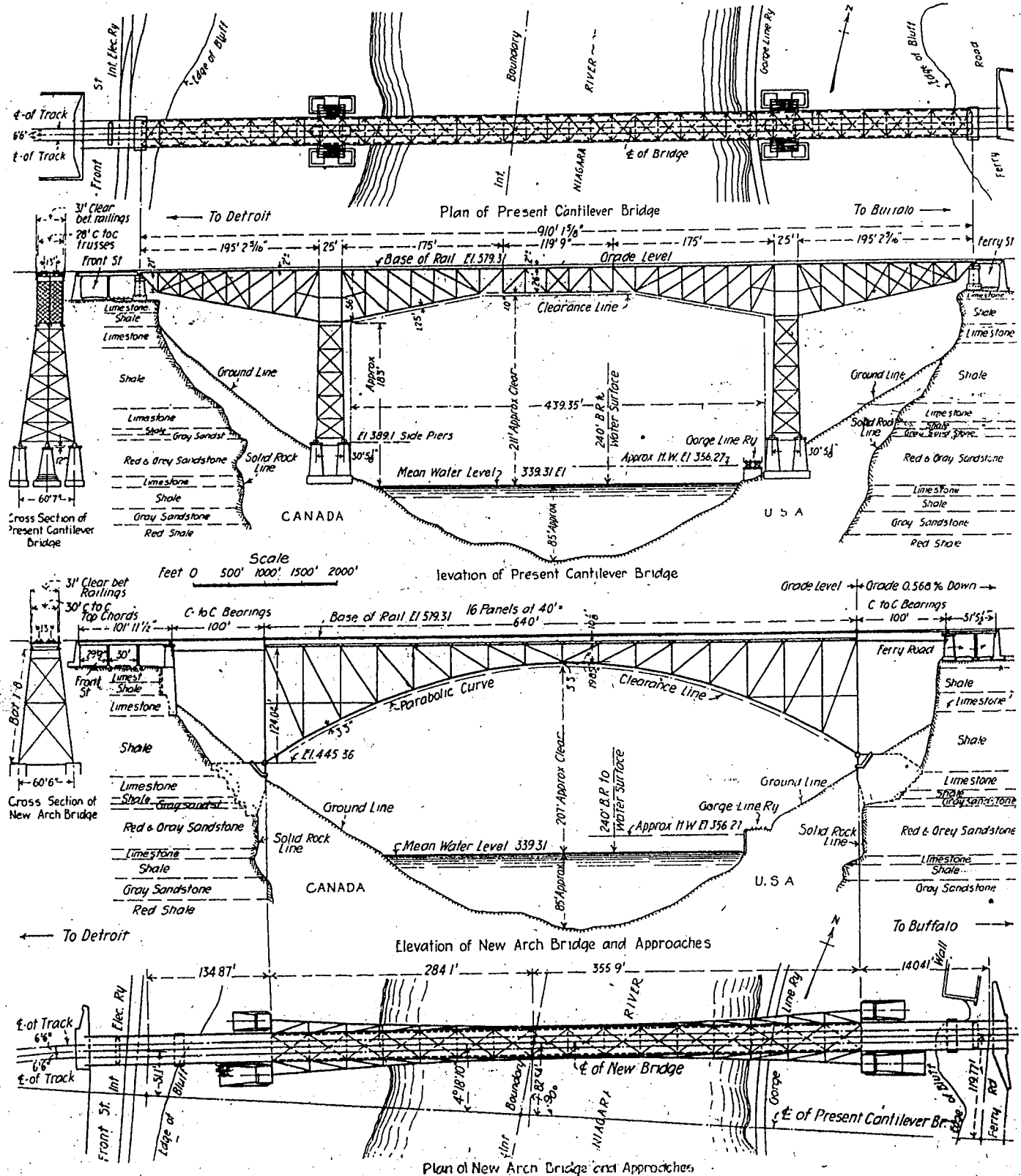
present is equivalent to a Cooper's E 45 loading; and as the bridge has for some time shown the effects of overload, which has made extensive repairs necessary from time to time, and as the necessary restrictions in loading and speed had become undesirable, it was deemed advisable to rebuild the bridge.

The first problem to solve in deciding on the character and length of the new structure was the examination of the rock formation of the gorge, in the neighborhood of the present bridge. The slope of the banks, at this point, rising from the water's edge at an inclination of about 1.3 horizontal to 1 vertical, consists of disintegrated material mixed with large and small boulders which have broken off from the rock ledges of the cliffs. Large boulders also fill the gorge below the water's level, standing

at about the same slope as the banks above the water's level, for about 100 ft. out from the water's edge, after which the slope is much flatter. The depth of the water at the center is about 80 ft. and there is at this point at least 120 ft. of loose rock overlying the solid rock. Extensive core borings made with the diamond drill, from a point just south of the present bridge to a point about 170 ft. north of the same on the United States side and 130 ft. north on the Canadian side, disclosed the profile and the

character of the solid rock formation, underlying the sloping bank of loose material. The information gained from these borings indicated that the gorge narrows up considerably north of the present bridge and that the slope of the rock surface is very steep.

The natural and the most economic structure for a location of this kind is an arch, and so as to shorten the span as much as possible, and make it possible to erect the structure without interfering with traffic on the present bridge, it was



WELLAND

NOVEMBER 26, 1926

A Pere Marquette freight train travelling east from St Thomas on the Michigan Central mainline, Tuesday November 27th, 1926 when it passed the Welland station, and came to the Canadian National diamond crossing, the locomotive derailed right on the crossing. The engine slammed on to the roadbed and several freight cars were piled up in the ditch. This was a strategic location for the Niagara region for the wreck blocked the Canadian National, the Wabash, the Michigan Central, the Pere Marquette and the Toronto, Hamilton and Buffalo Railways. It took several days for this wreck to be cleaned up.

The New York Central System acquired their last Pacific's the K-5 Class from American Locomotive Company in the years 1924 to 1927. These engines had 79" drivers. The St Thomas Times-Journal carried the following reports when they arrived on the Canada Division in January 1927.

JANUARY 14, 1927: Two of the five new passenger locomotives, known as the K-5 type, which are placed in service on the Canadian Division of the Michigan Central Railroad arrived here (in St Thomas) Thursday. Delivery of the other three is expected early next week, Division Master Mechanic Roy Benson announced. The other three have left the shops and are ready for service. Contrary to reports that are current, the locomotives will not be in service from Harmon, New York to Windsor but will operate from Windsor to Buffalo, as passenger locomotives are at present operated. Five of the "big boys" are also being placed in service on the Jackson Division of the MCR. The K-5's are among the largest and most modern passenger locomotives built and are in operation on several of the largest roads in the United States. They have been used for hauling passenger trains on the Chicago-Detroit run of the New York Central Lines for some time. The locomotives are equipped with automatic stokers and are declared to be the last word in speed and efficiency. The five placed in service here will haul such fast trains as the "Wolverine" and "Detroiter" across Western Ontario. They were built at the locomotive works at Schenectady.

JANUARY 18, 1927: To what extent the arrival of the huge new passenger engines on the local division of the Michigan Central may revolutionize the handling of limiteds through here is not definitely announced by officials but experiments are being conducted now with great success. It was learned Tuesday that three more of the big K-5 locomotives reached here Monday night making a total of five of the "8300" series to

be received recently. On Monday the officials broke in a couple of the engines by allowing them to haul "drag" freight trains. While generally considered a passenger engine the new engines can be used for fast freight service too. Plans are being worked out for giving the engines a great amount of long hauling to do and while at present only the stretch of track between Windsor and Bridgeburg is being traversed in one run it is possible that the distance may be lengthened. There are many features which make the new engines the last word in locomotive construction. Among the outstanding devices never before used on power here are: duplex automatic stokers, feed water system, boosters and a power feed lubricator. It is claimed that the engines are capable of hauling 30 steel Pullmans so that this will do away with a number of extra sections. Between 12 and 16 is about average for the engines now in service. It is understood that the quota of five engines is all that the local division will receive for the present.

JANUARY 20, 1927                      The five huge new locomotives assigned to the Canada division may be placed in passenger service Friday evening. All the engines have made trips over the division on freight and their performances have been so successful that the officers are inclined to try them on passenger runs right away. Two of the engines in the form of a double-header hauled a 113 car freight train from here to Windsor in record time. Another single engine hauled a train of over 100 cars in quick time.

JANUARY 26, 1927:                      The big new engines on the local division of the Michigan central continue to make records on express through trains. Engine 8361 which hauled express train No. 33 from Windsor to Buffalo Tuesday, came back on train No. 39, another express limited, Wednesday, while another one of the big ones hauled express train No. 34 to St Thomas from Windsor Wednesday morning. passenger trains are sure to get the locomotives before many days.



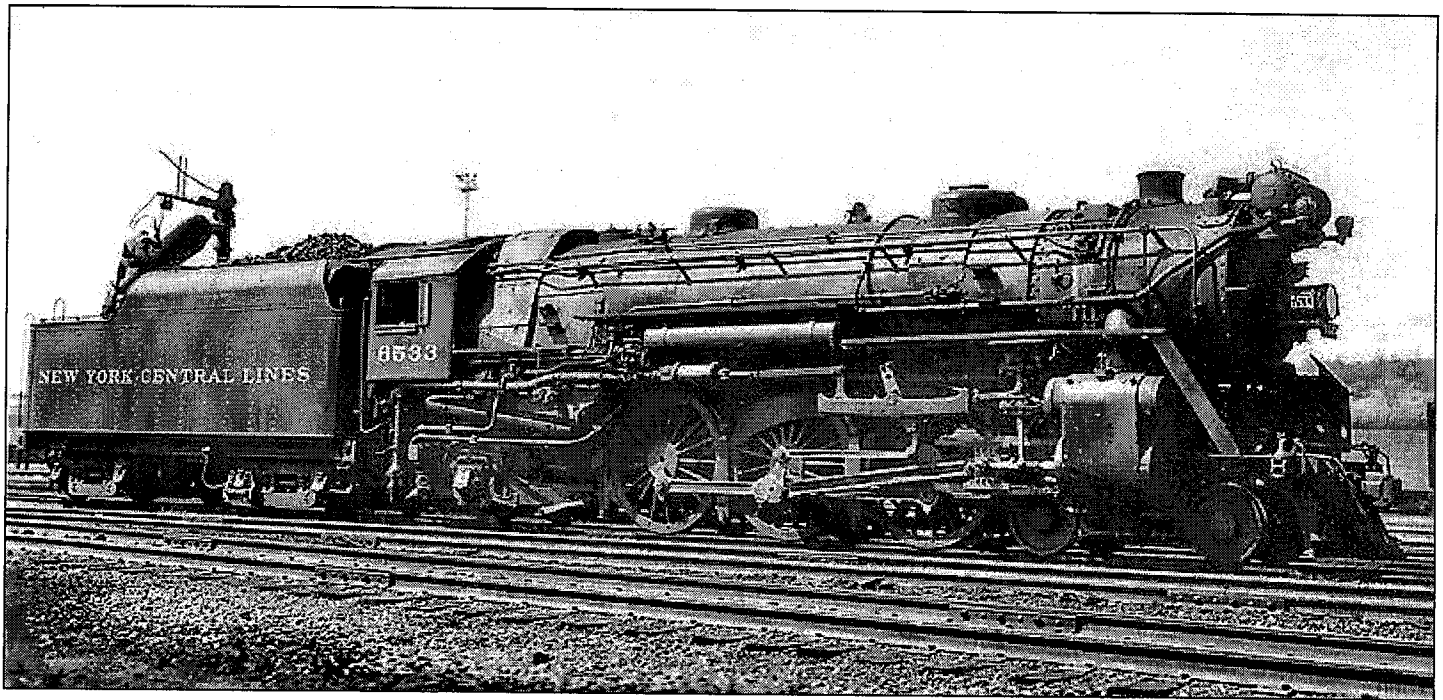
JANUARY 29, 1927: Engine 8362 one of the big Michigan Central locomotives made another fast trip Saturday morning on express train No. 33 from Windsor to Buffalo. The engines are gradually getting into form. Engine 8363 hauled passenger train No.15 from Buffalo to Windsor Saturday morning.

FEBRUARY 5, 1927: That the big 8300 class engines are making some good runs on the heavy passenger trains is evident. Engine No. 8362 brought the Detroit from Windsor to St Thomas on schedule time. The train comprised twelve cars. The engine ran through from here to Buffalo.

&lt;&lt;&lt; Prev Page

Return to Selections

Next Page &gt;&gt;&gt;



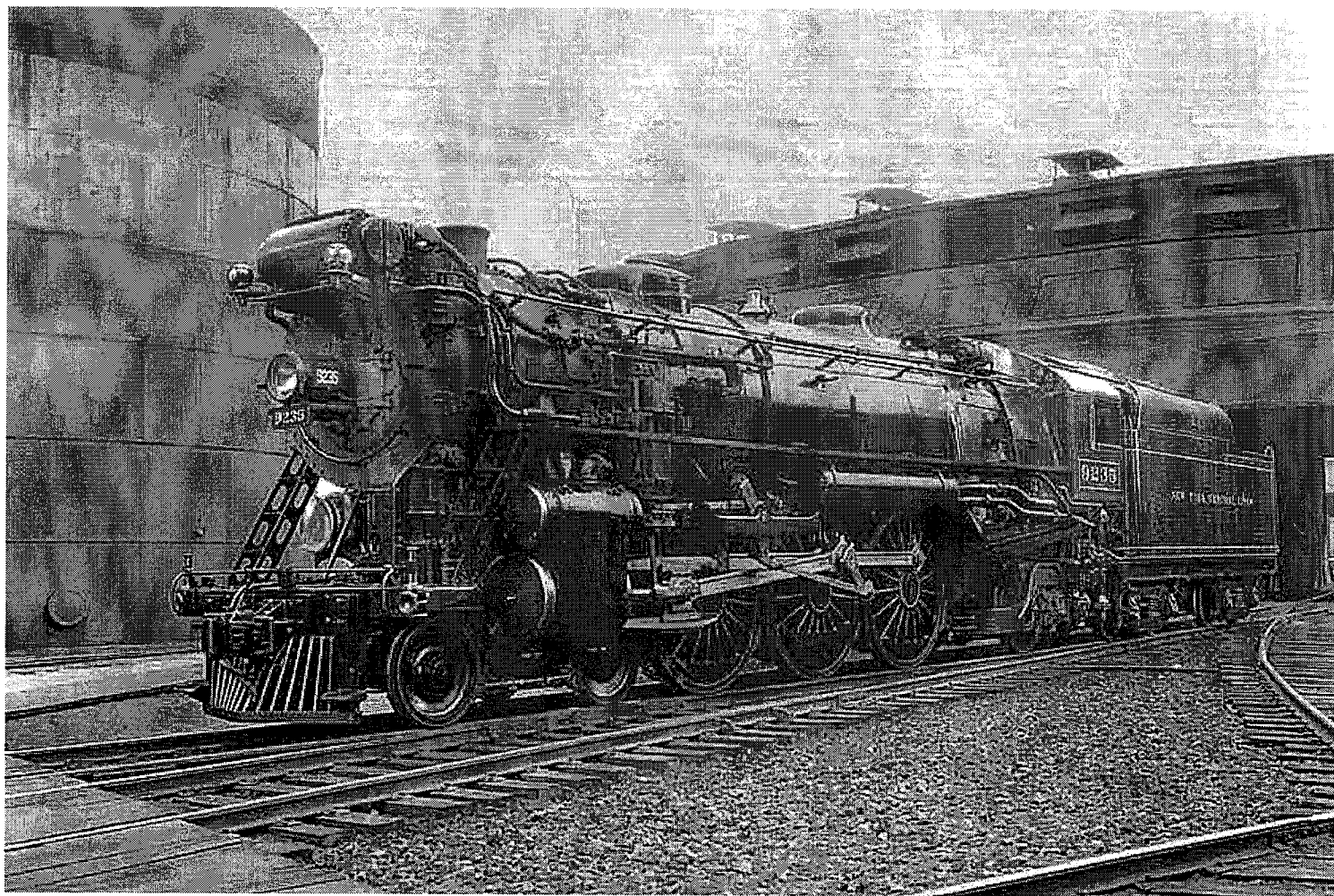
The prominent Elesco feedwater heater gives Pacific No. 4933 an impressive and powerful look in this photo taken by Robert Graham of St. Paul, Minnesota, somewhere on the "Big Four" before her 1936 renumbering from CCC&StL No. 6533. The last 4-6-2s delivered to the New York Central System before the appearance of the Hudson type, the engines of class K-5 were powerful enough, exerting 38,600 pounds of tractive force, with a booster adding 9,950 pounds. They had a grate area of 68 square feet, 3950 square feet of evaporative heating surface, and 1150 square feet of superheating surface. No. 4933 began life as Pittsburgh & Lake Erie No. 9237 before her transfer to the Big Four. She was a representative of class K-5b, built by American Locomotive Company in 1927. These engines had 79-inch drivers, cylinder dimensions of 25x28 inches, and a boiler pressure of 205 pounds per square inch. Like other members of this subclass, No. 4933 weighed 297,500 pounds. Although some of the K-5 series had slightly differing specifications, this locomotive, which was retired and scrapped in 1952, can be taken as a good representative of the last group of 4-6-2s added to the Central's fleet.

Two K-5b sisters, Nos. 4915 and 4917, received **streamlined shrouds and disc drivers** in 1936, as seen in a Gary Overfield photo in George Elwood's collection. As a result they weighed more than the other K-5s, at 317,000 pounds. They powered the Detroit-Cleveland *Mercury*, later the Cincinnati-Chicago *James Whitcomb Riley*.

&lt;&lt;&lt; Prev Page

Return to Selections

Next Page &gt;&gt;&gt;



## PETROLIA

APRIL 23, 1928

The Michigan Central passenger train from Courtright to Petrolea left the rails April 23rd, 1928. the train left the rails and rolled down into the ditch less than a mile south of Corey, which is about four miles from Petrolia. All the passengers, mostly students were travelling in to attend the Petrolia High School were severly shook up. Three passengers were slightly injured. The accident was due to a rail spreading. The train consisted of an engine and tender and an accommodation passenger car. the train was slowing for a station stop at Corey when the locomotive left the rails and then the tender and passenger car followed. All three ended up in the ditch. The locomotive and tender were badly damaged. Engineer M. Tracey of St Thomas, and his fireman escaped uninjured.

## NYC HUDSON'S

The New York Central Railway developed the 4-6-4 type Hudson out of a need to have a locomotive capable of pulling long sixteen and eighteen car steel passenger trains at higher speeds. Designed in 1926, the first engine was delivered February 1927. The NYC obtained 105 locomotives from American Locomotive Company in 1927. The NYC engines were numbered 5200 to 5305. NYC subsidiary Michigan Central purchased thirty Hudsons from American Locomotive Company in three orders; ten in 1927, 8200-8209; five in 1929, 8210-8214; and fifteen in 1930, 8215-8229.

At the beginning of January, 1928 six new Michigan Central 8200 class Hudson locomotives came to Canada, they were used on the fast NYC Limiteds between Windsor, Ontario and Harmon, New York. Harmon was the point where steam engines were replaced by electric locomotives for the trip into Grand Central Station, New York City. The Hudsons assignment to Windsor was because steam engines could not run through the Detroit River Tunnel and here as well the steam locomotive was replaced by electric locomotive for the trip into Detroit. The six engines were 8204 to 8209.

March 24th, 1928 the London Free Press reported that the big Hudson sport model locomotives do not conform with the Canadian Government safety regulations in some respect and as a result of orders from Ottawa the Hudson's have been taken off the Canadian Division of the Michigan Central. The safety standards that were lacking was a small pilot step and a railing around the coal space on the tender.

The big locomotives had been used on the fast Limiteds of the NYC Lines between Windsor and Harmon. and after two months of successful operation the long run was discontinued on that March 24th. Three of the fast Limiteds had been hauled by the big engines on the long haul in both directions. For the time the older Pacific's operated between Windsor and Buffalo. It was not long before the steps and handrails were added and the Hudson engines returned to Canada.

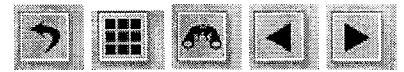
## NYC HUDSONS

JUNE 25, 1929. A crew composed of St Thomas Michigan central men had the distinction of operating the first passenger train out of the new New York Central Railway's Buffalo Central Terminal depot on Sunday June 22nd, 1929. Train No. 17, the westbound section of the Wolverine, left the station 33 minutes late but made up all this lost time on the Canadian division en route to Windsor. Conductor Joe Howkins train made the 238 mile run in 242 minutes. which means the limited was speeding along well a mile-a-minute in some spots. Engine 5303 hauled the train and it was one o the big N.Y.C. Hudson type sport model engines that operates between Windsor and Harmon, New York on the 700 mile haul. The Engineers were Jack Vance and John Jagoe and Firemen James Ferguson and William Bell.

JULY 8, 1929: Only recently the New York Central lines announced the purchase of many big engines and this week a report was heard at the Michigan Central Railroad that five were to be assigned to the Canadian Division immediately upon their delivery from the factory. They are similar to the Hudson sport model locomotive that is being used on the long hauls between Harmon, New York and Windsor although they have some new fixtures; probably to haul heavier trains at greater speed. There are already five of these big engines on the Canadian Division along with the ones which run through.

DECEMBER 23, 1929. A gift of seven of the large J-1 passenger locomotives is to be made on the Canadian Division of the Michigan Central Railroad in the near future. The new loco's will handle the fast passenger Limited's between Windsor and Buffalo with occasional long hauls to Harmon, New York, a distance of 700 miles.

DECEMBER 24, 1929. The announcement that the local division was to receive seven of the large Hudson sport model passenger locomotives as a Yuletide present from the U.S. lines, was followed Tuesday by the report that the first of the seven had arrived. Engine 8215 newly painted and the



**Photo Number:** STR28204a

**Photographer:** unknown

**Railway Name:** NEW YORK CENTRAL & HUDSON RIVER

**Subject:** MOTIVE POWER - STEAM LOCO

**Model:** ATLANTIC

**Type:** 4-4-2

**Equipment Number:** 2986

**Collection:** STR

THE  
CANADA DIVISION  
OF THE  
MICHIGAN CENTRAL  
RAILWAY

C. H. RIFF  
2013



## NYC HUDSONS

largest mogul on the N.Y.C. system reached the Michigan Central at Bridgeburg Monday at 5:40 p.m. and was brought to the St Thomas locomotive shops where a special force of men were ready to inspect her. The big steel horse was groomed for travel during the night and was placed on the westbound mail train Tuesday morning at 8:15 o'clock. The train made a stop at every station between here and Windsor giving everyone a chance to see the latest in engine construction.

DECEMBER 27, 1929: The Christmas gift of seven locomotives of the J-1-B type are expected to be all delivered by New Year's. Two more of the seven arrived Wednesday morning, making three in all. These locomotives of the Hudson sport model type are almost the same as the other seven of the "5200" class in service on the Canadian division. The only difference is that the new ones have the Standard instead of the Duplex stoker and the Baker instead of Walschaert valves. They will operate through between Windsor and Buffalo, only coming into the local shops for extensive repairs. At present the only engines operating through on the long 700 mile haul between Harmon and Windsor are the "5200" class of the N.Y.C. Lines used to haul the east-bound and west-bound sections of the Wolverine and the Detrouiter.

## NYC HUDSON'S

January 1930 more brand new Hudsons had arrived from Alco. The St Thomas Times-Journal reported January 3rd that the entire seven new engines of the J-1-B type had been received and are being used to haul the fast Limiteds between Windsor and Buffalo. This makes 14 in all of the Hudson type sport model locomotives now in service on the mainline through St Thomas. in addition some of the NYC 5200 class locomotives were operating through Canada between Windsor and Harmon. These engines were MCR 8215 to 8229. The first six Hudsons 8204 to 8409 were returned to the United States in return for these newer engines.

In 1936 all the Michigan Central engines were renumbered New York Central 5349 to 5374.

## NYC HUDSONS

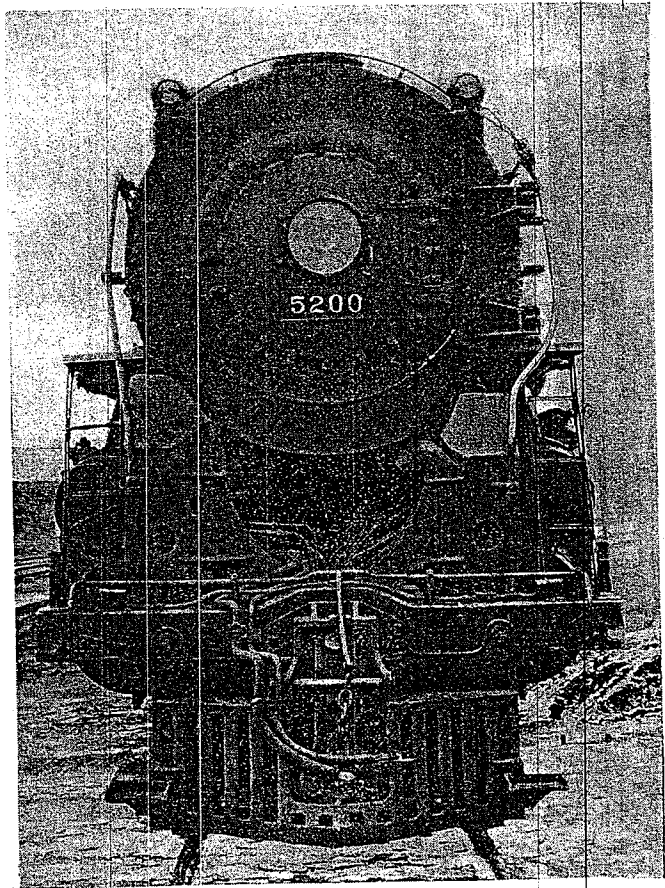
SEPTEMBER 12, 1930      Besides the large "5200" class engines of the New York Central lines some of the "5300" class are also moving over the Canadian Division of the Michigan Central Railway it was learned this week. The "5300s" are a newer and slightly larger type than the "5200s" although they were patterned after the others. There are several of the "5200" class assigned to duty on the Michigan Central between Windsor and Buffalo, but some of the N.Y.C. engines come through on the long haul between Windsor and Harmon, New York. These engines are only handled on the eastbound and westbound sections of the Wolverine and the Detroit. The Wolverine the other night was pulled by 5310.

# First Hudson Type Locomotive

*New York Central receives 4-6-4 heavy passenger engine from American Locomotive Company*

THE first locomotive of the 4-6-4 wheel arrangement to be built in America has been placed in service by the New York Central following ceremonies at Schenectady, N. Y., on February 14, at which time it was formally delivered to the railroad by the American Locomotive Company and christened the "Hudson" type. The four-wheel trailer of the new locomotive permits the development of a material increase in boiler capacity and in maximum horsepower output in a six-coupled driving wheel base over that obtainable in a Pacific type. The locomotive will be used in high speed main line passenger service on the Twentieth Century Limited, the Empire State Express, the Southwestern Limited, the Detroit and other important passenger trains where its added starting and horsepower capacity will permit a reduction in the number of sections of some of these trains which it is necessary to run with the present heavy Pacific type motive power.

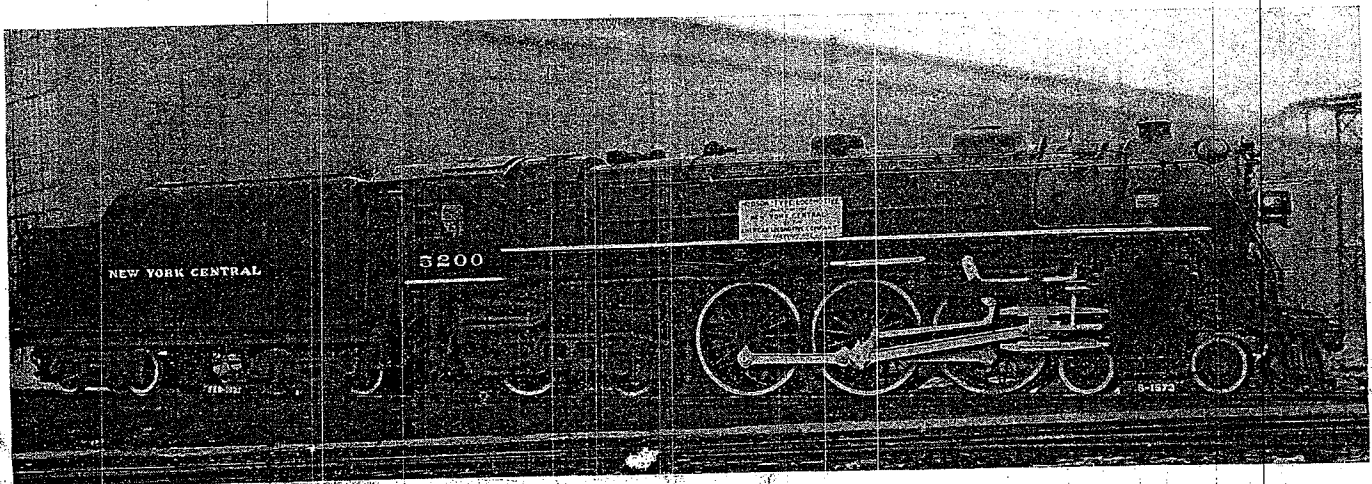
The engineering in the design of the Hudson type locomotive represents a distinct achievement in a number of features through the co-operative efforts of the equipment engineering department of the railroad and the engineering department of the builders. The locomotive develops a maximum rated tractive force of 53,500 lb., including 10,900 lb. supplied by the booster, which represents a substantial increase in tractive force over the present Pacific type locomotives now handling the heavy fast passenger trains. With cylinders 25 in. by 28 in., operating at nominal full stroke cut-off, 79-in. driving wheels and a boiler pressure of 225 lb. per sq. in., this tractive force is developed with a total weight on drivers of 182,000 lb., or slightly more than an average of 60,000 lb. per pair. The total weight of the locomotive is 343,000 lb., of which 63,500 lb. is on the engine truck and 97,000 lb. on the four-wheel trailer truck. In the development of the design, extreme care was taken in the distribution of wheel loads and in keep-

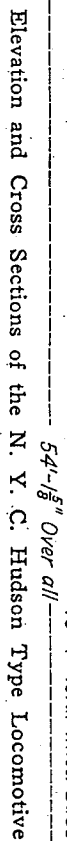
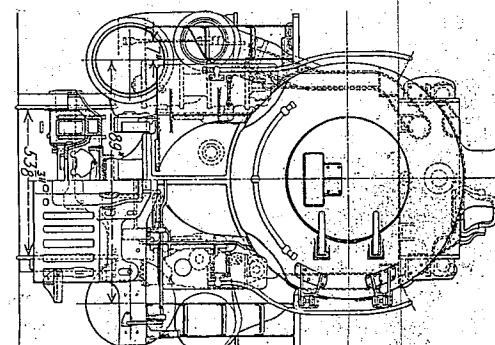


ing down the weight of material in machinery parts in order that rail and bridge stresses might be kept to a minimum as an aid to safety of operation and economical track and roadbed maintenance.

In the design of the boiler the additional capacity of the four-wheel trailing truck was utilized to increase both the size of the firebox and the boiler capacity. It includes a Type E superheater with 1,965 sq. ft. of heating surface which added to the 4,491 sq. ft. of evaporating surface, gives a total of 6,456 sq. ft. of heat transferring surface. The firebox has a grate area of 81½ sq. ft. and is fitted with cast steel grate bars which accounted for a substantial reduction in weight. The boiler is fired by a D-3 Duplex stoker.

The arrangement made for the location of the Elesco feedwater heater below the top of the smokebox shell is of unusual interest, in that it effects a material im-





# Elevation and Cross Sections of the N. Y. C. Hudson Type Locomotive

provement in the appearance of the locomotive. The heater is supported on a shelf welded into the top of the smokebox just back of the front end door ring. With the heater in place, the opening over the shelf is closed with plates which complete the circle of the front end so that only the ends of the heater are exposed beyond the curve of the smokebox shell. The appearance of the locomotive is further improved by enclosing the pipe connections to the heater in conduits which pass down through the smoke box and are welded to the heater shelf at the top and to the smokebox sheets at the bottom.

The locomotive is equipped with the American type multiple disc throttle, the valves of which are housed in the superheater header casting. A removable cover plate over the top of the smokebox back of the stack permits access to the superheater unit bolts and the valves of the throttle without entering the front end.

The cylinders are of cast steel with inside exhaust passages. They have been arranged so that during dynamometer tests the possible advantages of limited cut-off in high speed passenger service may be fully investigated.

Among the machinery details the four-wheel Commonwealth Delta type trailing truck is of greatest interest. This follows the principles of suspension and weight distribution of the well-known Delta type two-wheel trailer truck, with the driving wheels and both trailing truck wheels on each side of the locomotive equalized together. The design is worked out in combination with the standard inside cradle casting, permitting the tractive force of the engine to be transmitted through the cradle extension of the main frame system to the engine and tender drawbar. The front wheels of the trailer truck are 36 in. in diameter. The rear wheels which carry the Type C-2 booster, are 51 in. in diameter.

The locomotive is equipped with Alco main driving boxes. These boxes are fitted with supplementary bearings on each side below the center line of the axle which are securely held in position against shoulders on the lower edges of the crown brass by wedges. The engine trucks are fitted with the locomotive company's quick packing cellars which are readily accessible from the inside for repacking without the necessity of dropping the cellars.

Steam distribution is controlled by the Walschaert valve gear and a Precision reverse gear. The valve gear is designed for long travel.

Care has been taken throughout the design to reduce to a minimum the number of supporting bracket details and the number of studs in the boiler from which these brackets must be supported. On the left side of the locomotive a combined bracket and pipe clamp supports the main reservoir and the booster throttle valve. Similarly, on the right side the reverse gear cylinder and distributing valve are supported by a single bracket, as have also the force feed lubricator and the feedwater heater condensate trap, just back of the cylinders.

A number of locomotives have been built with the air pumps located back of the front bumper bracket, under the smokebox. In this case the locomotive is equipped with one cross compound air compressor which is located under the smokebox on the right side of the locomotive while the feedwater pump is similarly located on the left side. This location permits a free flow of water from the tank to the pump and a short delivery from the pump to the feedwater heater drum. Provision has been made on the left side of the locomotive for the application of the feedwater pump, however, should it later become desirable to add a second air compressor.

the piping to prevent irregular lines along the outside of the boiler jacket. The sand pipes and traps are located under the jacket and all other pipes have been placed in as inconspicuous locations as possible and, where visible, the arrangement adheres to horizontal and vertical lines with few exceptions.

Similar care has been taken in the arrangement of the cab fittings. All steam pipes and valves as far as possible have been kept outside the cab under a turret housing over the top of the boiler in front of the cab. The steam valves in the turret are operated by extension handles which pass back through the cab wall, where they are arranged in a neat line across the top of the firebox on an instrument board, with each handle clearly labelled. With the exception of the air and back pressure gages, all of the gages in the cab have also been assembled on the instrument board.

Among special equipment not heretofore mentioned are the G. R. S. automatic train control, Nathan force feed lubricator, Graham-White sanders, the Pierce bell ringer, and air operated whistle.

As a result of the co-operation of the builder's entire organization the locomotive was built in an unusually short time. The boiler was received on the erecting floor on January 28, the main frames on February 1 and the cylinders on February 2. The locomotive was steamed, weighed and given its trial run on February 8, and completely finished and painted on February 9. No efforts, however, were spared to provide a high standard of workmanship throughout.

The New York Central will subject the New Hudson type locomotive to complete dynamometer tests to determine under actual operating conditions the efficiency of the entire machine and to reveal any possibilities for further improvements.

The table gives the principal dimensions, weights and proportions.

Table of Dimensions, Weights and Proportions of the New York Central "Hudson" Type Locomotive

Railroad	New York Central
Type of locomotive	4-6-4
Service	Passenger
Cylinders, diameter and stroke	25 in. by 28 in.
Valve gear, type	Walschaert
Valves, piston type, size	14 in.
Maximum travel	9 in.
Steam lap	1 1/2 in.
Exhaust clearance	7/8 in.
Lead	3/8 in.
Cut-off in full gear, per cent	86
Weights in working order:	
On drivers	182,000 lb.
On front truck	63,500 lb.
On trailing truck, front wheels	44,000 lb.
On trailing truck, rear wheels	53,500 lb.
Total engine	343,000 lb.
Tender	209,000 lb.
Wheel bases:	
Driving	14 ft. 0 in.
Rigid	14 ft. 0 in.
Total engine	40 ft. 4 in.
Total engine and tender	76 ft. 1 1/2 in.
Wheels, diameter outside tires:	
Driving	79 in.
Front truck	36 in.
Trailing truck, front wheels	36 in.
Trailing truck, rear wheels	51 in.
Journals, diameter and length:	
Driving, main	1 1/2 in. by 14 in.
Driving, others	1 1/2 in. by 13 in.
Front truck	7 in. by 12 in.
Trailing truck, front	6 1/2 in. by 12 in.
Trailing truck, back	9 in. by 14 in.
Boiler:	
Type	Straight top
Steam pressure	225 lb.
Fuel	Bituminous coal
Diameter, first ring, inside	82 1/2 in.
Firebox, length and width	130 in. by 90 1/4 in.
Height mud ring to crown sheet, back	65 1/2 in.
Height mud ring to crown sheet, front	86 3/4 in.
Arch tubes, number	4
Combustion chamber, length	None
Tubes, number and diameter	119, 3 3/4 in.
Flues, number and diameter	137, 2 1/4 in.
Length over tube sheets	182, 3 1/2 in.
	20 ft. 6 in.

# DE LUXE SPECIAL PLACED ON M.C.R.

LONDON  
Runs Between Chicago, Detroit  
and Buffalo Daily  
April 29 1929  
CONNECTS WITH LONDON

First Passenger For This City  
Checks In On Saturday

What is said to be the last word in railway passenger trains is the new Niagara Falls de luxe special of the Michigan Central, which was placed in operation for the first time yesterday. The service is between Chicago, Detroit and Buffalo, operating on fast daylight schedules in both directions.

The new "luxury special," as it already has been referred to, connects with London via the L. & P. S. electric line between this city and St. Thomas. Passengers going to Buffalo leave London at 4.15 p.m. and for Detroit and Chicago at 12.20 p.m.

The first passenger to London on the new special was M. Bendheim, of Los Angeles, who checked in at the Hotel London at 1 o'clock yesterday. "This certainly is the finest day train I have ever traveled on," declared Mr. Bendheim when interviewed this morning. "The equipment and service is par excellence; it leaves nothing to be desired."

The coaches are of an entirely new design, with individual seats and large windows. The interiors are tastefully decorated in walnut brown with tinted ceilings. The aisle floor is of comfortable and easy rubber tile, and the lavatories have hot and cold water. A train attendant is at the service of the passengers.

Comfortable wicker chairs, with deep-cushioned seats, and which can be moved about at the convenience of the passengers are a feature of the club car. In the centre of the car are two sections, one on each side, for the accommodation of those who desire to indulge in their favorite game of cards. Modern lavatories are located at each end of the car.

An innovation on regular trains operating west of Buffalo is the observation car which is at the disposal of coach passengers. It has a spacious platform, and the interior is an observation parlor with large windows, movable, upholstered chairs, carpeted floors and finished in harmonizing tones. This is the first time, it is stated, that a de luxe service has been available to passengers west of Buffalo. There is no extra fare charge in the United States, but none in Canada.

# NEW FAST TRAIN ON FIRST TRIP

Chicago-New York Flyer Passed  
Through St. Thomas

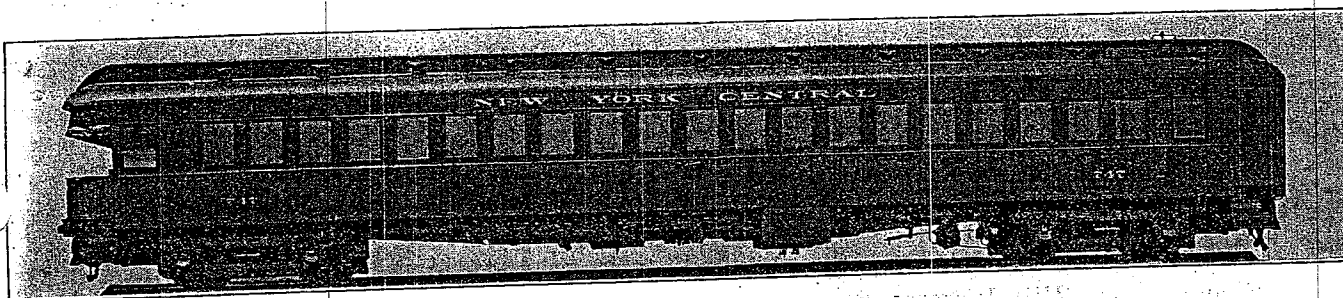
ST. THOMAS, April 31.—The new Niagara Falls De Luxe Limited, the new New York Central passenger train, described as the "most expensively equipped train on the continent," made its maiden run from Chicago to New York and back again to-day without mishap. She was on time at every point, arriving in St. Thomas from New York at 1.15 p.m. and at 5.15 p.m. from Chicago. The De Luxe Limited eastbound is an additional train and is known as No. 30, but westbound it takes the place of No. 63 and is known as 39. Superintendent E. E. Wright and District Passenger Agent W. K. Parkinson were on the train to-day.

The new train is painted in brown, with gold trimmings, the engines also following a particular design. The equipment consists of three coaches with separate seats upholstered in dark brown, gray and lighter colors. The baggage car is of the latest and most convenient design; there is a lounge car for men, with swiveled wicker chairs and seats along the sides, as well as in the centre; also a dining-car and observation car. The interior of all the cars is handsomely furnished and provides every convenience. Officials state that it is the highest priced equipment in service in America.

The train was piloted on the east by Engineer Archie Cottrell, and on the west division by Engineer Richard Cupples, both experienced and competent drivers. The train was well patronized to-day and, through the efforts of the local superintendent and Mr. Parkinson, will not travel through Canada in bond, but will receive passengers at St. Thomas, Windsor and the Falls.

LONDON Free Press

April 29 1929



One of the Observation Cars Used on the New York Central's Day Coach De Luxe Train

# New York Central Puts De Luxe Coach Train in Service

*Has observation car, dining car and coaches with rotating chairs—Hot and cold water in each car*

ON June 24, the New York Central initiated a new de luxe coach train service between New York and Buffalo, in which special provisions have been made for a maximum of comfort and pleasure for coach passengers without extra cost. The new trains, one in each direction daily, leave Buffalo and New York, respectively, at 9:30 a.m. and arrive at their respective terminals at 8:15 p.m., stopping at the principal cities on the way. Specially equipped coaches and observation cars have been provided for these trains by the conversion of standard passenger equipment, with a view to increasing the patronage of coach-train service. The normal make-up of the trains, which is shown in the table, is seven cars, but as many as eleven cars have already been run, including seven of the de luxe coaches—an indication that the public has been quick to take advantage of this service.

## Equipment of the Train

Twenty-seven all steel cars which, with the exception of four smoking cars and two dining cars, were built during the latter part of 1927, have been assigned to this service. The equipment consists of fifteen 70-ft. coaches in which double rotating chairs have been installed, four 70-ft. smoking cars, four 60-ft. baggage cars, two dining cars and two observation coaches. The two observation cars were converted by the Pullman Car & Manufacturing Corporation from standard 70-ft. steel coaches. All work in connection with remodeling the remaining 25 cars for the de luxe service was performed at the New York Central shops at West Albany.

## The Observation Coaches

The observation cars have a six-foot observation platform, equipped with an ornamental rail with end and

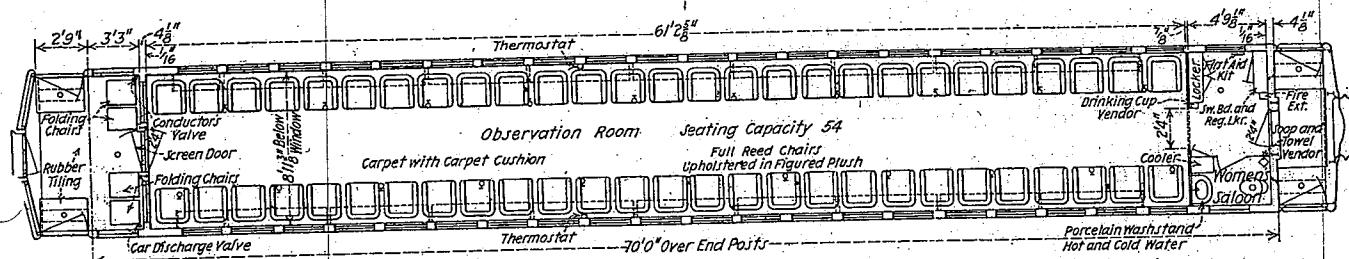
side gates. The platforms, including the trap doors, are covered with inlaid rubber tiling. Four folding chairs are provided on the platform. A canvas canopy, which may be rolled up when desired, extends around the end and sides under the hood, and three recessed electric lights are located in the ceiling. The color scheme of the interior of the observation cars is a combination of light brown and tan in flat colors, with fabric-faced figured window curtains to match. The floors are entirely covered with a heavy brown figured carpet, laid on a carpet cushion.

The seating equipment in these cars consists of 54 movable chairs. These chairs are of solid reed construction with deep air cushions and backs upholstered in figured mohair plush in brown tones to harmonize with the car interior.

A women's saloon only, is provided in the observation cars. This compartment is fitted with a hopper, a porcelain washstand having hot and cold water supply, and a coin-operated soap and towel vending machine. The interior of the saloon is finished in pearl gray enamel with nickel-plated fixtures. A sanitary water cooler is recessed in the saloon front, and cups are supplied from a coin-operated vending machine. Opposite the saloon is a locker for the use of the porter, two attendants being assigned to the train, one in the observation car and the other in the coaches. The electric lighting system consists of 22 deck-sill fixtures in the body of the car in accordance with the railroad company's standard practice.

## The De Luxe Coaches

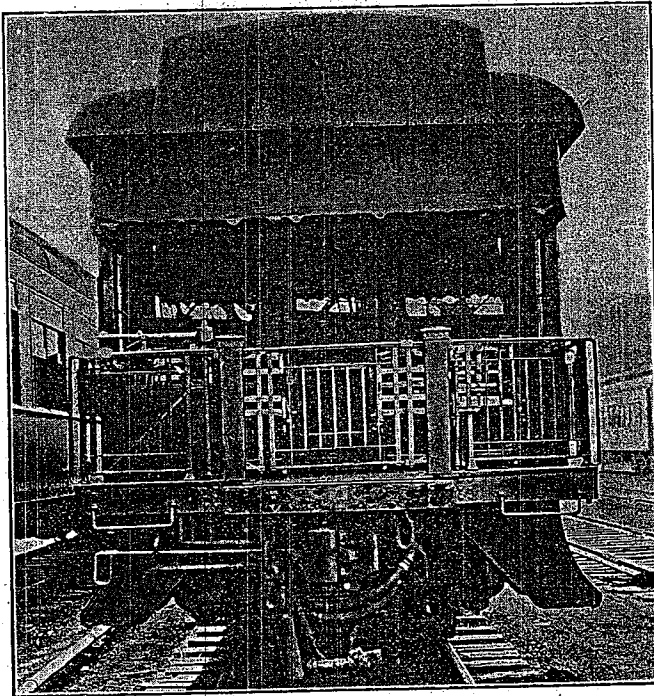
The principal change made in the 15 coaches was the replacing of the standard seats with rotating chairs of the bucket type. Each coach is provided with 40 double chairs and two single chairs, giving a total seating capac-



The Floor Plan of One of the Observation Cars Used on the New York Central Coach Train De Luxe



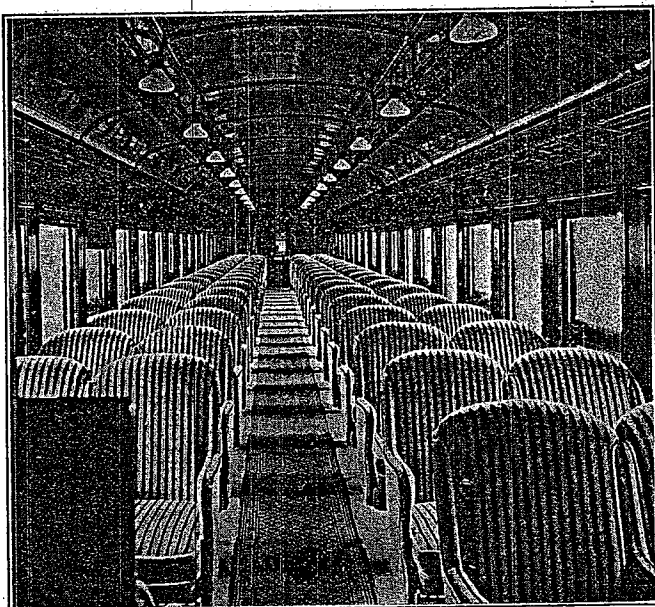
ity of 82 passengers. The chairs have double-spring air-cushion seats. The two-passenger seats have a center separator as well as side arm rests, making each seat individual in character. All of the chairs are upholstered with a two-tone brown striped mohair plush on the



The Rear End of the Observation Car, Showing the Two-inch Flexible Steam-heat Connections.

cushions and the insides of the backs, while the rear and sides are covered with the same material in plain, light brown.

The interior finish in the coaches is in walnut graining. The upper and lower deck headlinings are finished in light gray enamel, with the ceiling beams in a darker



The Striped Mohair Upholstery on the Rotating Chairs in the De Luxe Coaches Provides a Pleasing Appearance

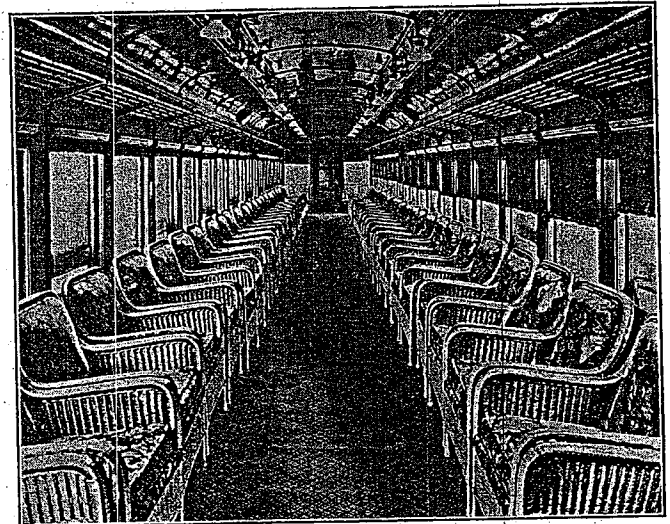
shade. A carpet aisle strip is provided in each coach in a brown pattern, harmonizing with the chairs.

Each coach has two saloons, each equipped with a

hopper, a washstand with hot and cold water supply, and soap and towel vendors. The interiors of the saloons, as in the observation cars, are in pearl gray with nickel-plated fittings. The lighting arrangement, as in the observation cars, consists of 22 deck-sill fixtures.

A feature of these cars, which has been adopted as standard, is a type of parcel rack which has brackets supporting the rack from below, providing a continuous rack, without top obstructions, the full length of the car on each side. This permits the placing of long parcels in the rack without interference with the supports as is the case with the top-supported form of rack. One coin-operated vendor and one free flat-cup receptacle, are located in each car.

The smoking cars, which seat 85 passengers each, are equipped with the usual type of reversible seats, upholstered in green figured plush. The cars have been redecorated inside with a light maroon enamel with pearl gray headlining and maroon ceiling beams. An inlaid aisle strip has been provided the full length of the car, flush with the top of the floor, of checkered rubber tiling with a brass binder on each edge. Each smoking car has two saloons, each with a hopper, washstand with cold water, and a soap and towel vendor.



Fifty-four Solid Reed Chairs are Provided in Each Observation Car

The two dining cars in service on these trains are modern cars, seating 86 persons and are decorated and grained in brown mahogany. Special menus, on which is printed the name of the train, are furnished.

All of the cars in the train are equipped with thermostatic control for the vapor heat, except the baggage cars, in which manually operated valves are used. In the coaches and observation cars, two thermostats are used, one on each side of the car, controlling the magnet shut-off valves on each side of the car independently. One thermostat is provided in each of the dining and smoking cars.

On the entire equipment for both trains 2-in. steam-heat end valves, with 2-in. flexible metallic steam connections, have been installed. In order to furnish hot water for the wash basins in the coaches and observation cars, steam is supplied to the train line at all times. A branch steam pipe from the main steam line, equipped with a vapor regulator, is connected to a hot-water jacket under the wash basin in each saloon. Water is supplied to this jacket by gravity from an overhead water tank in the saloon, which also supplies cold water for the wash basin and for the hopper.

Each car in the train is provided with a fire extinguisher, emergency tools and first-aid kit. The observation car is equipped on the rear end with electric markers, outlets being located in the ceiling under the hood for cable attachment to the marker lamps.

In the coaches and observation cars, removable metal-frame copper wire screens are provided for every other window, under the outside sash. In the dining cars, screens are located at each window in the dining compartment, fitted with cinder deflectors.

#### The Normal Make-Up of the N. Y. C. "Day Coach De Luxe" Train

No. and type of cars	Weight
1 Baggage .....	111,750 lb.
1 Coach smoker .....	134,700 lb.
3 De luxe coaches (132,950 lb. each) .....	398,850 lb.
1 Dining car .....	172,700 lb.
1 Observation coach .....	127,800 lb.
7 Total .....	945,800 lb. or 473 tons

In equipping the coaches with the bucket-type seats, and installing water heating equipment and other details, the weight of the de luxe coaches was increased about 3,000 lb. over their weight prior to conversion. The observation coaches are approximately the same amount lighter than with their original construction. The modifications in the other cars made no appreciable difference in their individual weights. The table shows the weights of the cars comprising one train of normal make-up.



One of the Dining Cars

The exteriors of all of the cars were revarnished. All of the cars are of the latest all-steel construction, a uniform appearance is obtained, resulting in a train which

is attractive on the exterior, as it is in the interior, and which from all standpoints, represents a distinct advance in strictly coach train service.

## Freight Car Loading

WASHINGTON, D. C.  
**R**EVENUE freight car loading during the week ended July 28 amounted to 1,033,976 cars, an increase of 160 cars over the preceding week but a decrease of 10,721 and 62,021 cars respectively as compared with loading in the corresponding weeks of 1927 and 1926. Only the loading of miscellaneous freight was larger than a year ago. Loading in the Central Western and Southwestern districts was larger than last year but the totals in other districts showed decreases. The summary, as compiled by the Car Service Division of the American Railway Association, follows:

#### Revenue Freight Car Loading Week ended Saturday, July 28, 1928

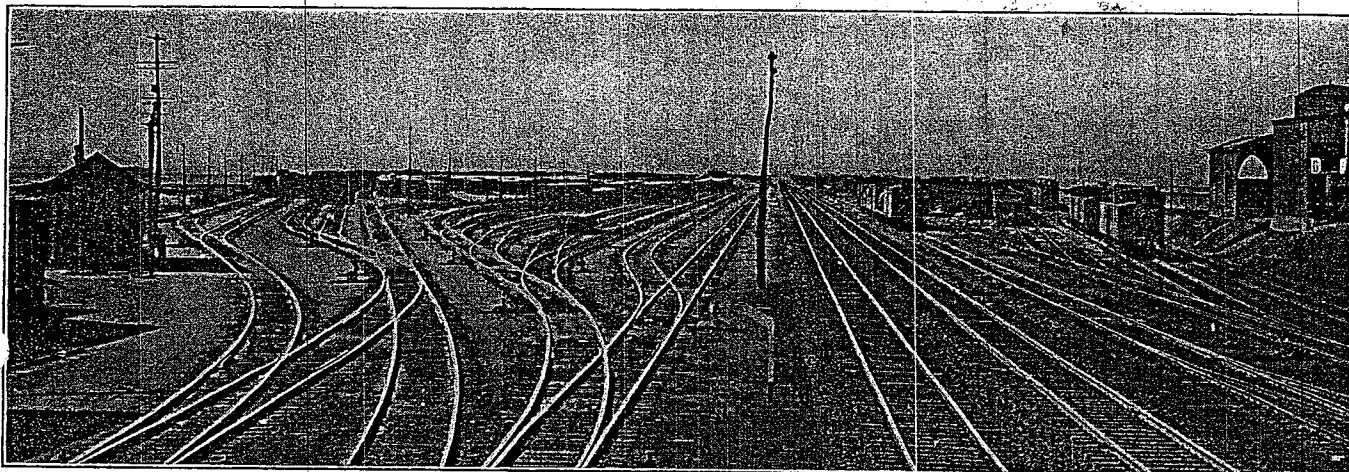
Districts	1928	1927	1926
Eastern .....	234,045	235,729	251,107
Allegheny .....	208,628	211,631	224,600
Pocahontas .....	56,965	59,926	61,840
Southern .....	142,079	151,324	148,749
Northwestern .....	157,697	159,943	167,780
Central Western .....	154,407	150,123	162,205
Southwestern .....	80,155	76,021	409,701
Total Western Districts .....	392,259	386,087	409,701
Total All Roads .....	1,033,976	1,044,697	1,095,997
Commodities			
Grain and Grain Products .....	55,265	58,801	62,739
Live Stock .....	22,046	26,434	27,034
Coal .....	156,213	158,412	192,454
Coke .....	8,632	9,524	11,386
Forest Products .....	65,768	69,544	72,078
Ore .....	62,577	64,442	75,118
Merchandise L. C. L. .....	255,192	256,745	256,250
Miscellaneous .....	408,283	400,795	398,938
July 28 .....	1,033,976	1,044,697	1,095,997
July 21 .....	1,033,816	1,012,585	1,078,193
July 14 .....	1,024,534	1,017,394	1,076,372
July 7 .....	850,605	839,085	897,556
June 30 .....	1,003,049	1,021,438	1,065,641
Cumulative total, 31 weeks .....	28,400,036	29,434,801	29,481,350

#### Car Loading in Canada

Revenue car loadings at stations in Canada for the week ended July 28 totalled 69,208 cars, a slight decrease from the previous week but an increase of 6,968 cars over the same week last year.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada .....	69,208	37,743
July 28, 1928 .....	69,464	37,654
July 21, 1928 .....	69,047	36,331
July 14, 1928 .....	62,240	35,958
July 30, 1927 .....		
Cumulative Totals for Canada .....	1,932,941	1,165,133
July 28, 1928 .....	1,818,842	1,142,524
July 30, 1927 .....	1,725,519	1,117,094

\* \* \* \* \*



General View D. L. & W. Yards, Secaucus, N. J.

## BRIDGEBURG YARD

The 1917 coal famine that developed at the border gateway while the press at the time seemed to concentrate on the Grand Trunk; the TH&B and the New York Central found that they had major problems at the Buffalo region. The TH&B answered the problem in two ways. The first was the use of a car ferry to Port Maitland to avoid the Buffalo area entirely. The second was that the TH&B established their own yard at Bridgeburg, later known as Fort Erie. Bridgeburg was at the Canadian end of the International Bridge that crosses the Niagara River to Buffalo. In the summer of 1917 the company acquired fifty acres of land, the Riselay Farm, adjacent to the Michigan Central and Grand Trunk tracks. The MCR Niagara Branch was relocated at this time. The Dominion Construction Company did the construction of the new yard and engine terminal. The TH&B had transferred all its freight business to the MCR at Welland, but now the TH&B made an arrangement to have running rights over the Michigan Central between Welland and Fort Erie. The yard and terminal was completed and put in operation November 1st, 1917. The TH&B Fort Erie yard was operated only by the company until September 19th, 1928 when the TH&B sold the yard to the Canada Southern-Michigan Central. The later gave it the name Victoria Yard. The TH&B continued to use the yard until the depression years when it was closed for four years but the TH&B re-opened the yard February 17th, 1935.

## THE GIRAFFE TRAIN

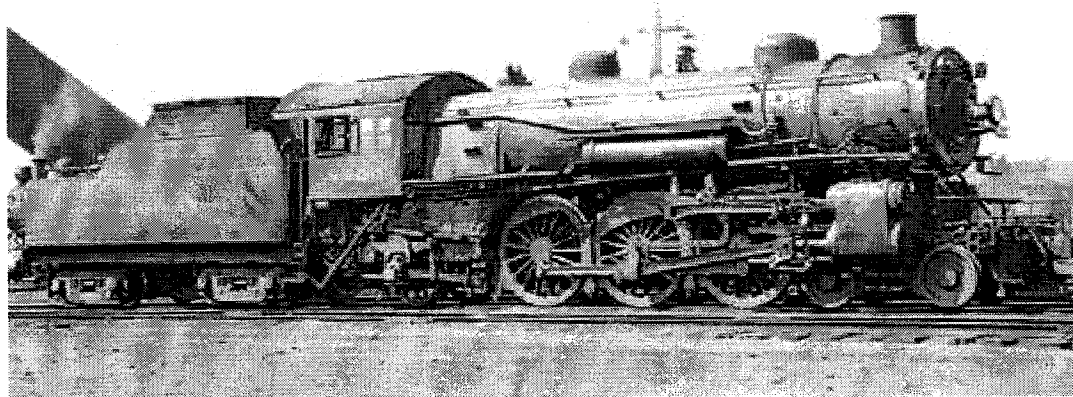
One of the most unusual transportation shipments of all time had to be the shipment of two giraffes from Boston to Detroit. A Detroit auto dealer, Aaron De Roy, had purchased two giraffes in Germany and he wanted to present these unique creatures to the Detroit Zoological Park. They were shipped to North America by a German steamship, and landed at Boston July 16th, 1929. They were put in quarantine for two weeks. Plans were made for the giraffes to travel over the Boston and Maine Railroad to the NYC, then to move them west over the NYC-Michigan Central Railroads through Canada. A number of complications were quickly apparent, how to get them through low bridges and the Detroit River tunnel. Special cages with collapsible tops were built on flatcars used in the past to ship cannons. July 30th 1929, the giraffes made a safe passage through Canada. The train on which the giraffes were handled was S.D.-3, one of the fast westbound symbol trains which made a daily trip between Bridgeburg and Windsor. The animals, with 27 foot long necks, were forced to duck their heads when passing under all the overhead bridges. An attendant travelled with the giraffes, and with a rope tied around their necks, pulled their heads down at the bridges. They passed through St Thomas at 2:10 in the morning. After a tedious trip through the tunnel to Detroit, they were allowed to stretch their necks and get back to normal. One of the crew members told the story that as the train passed over some of the bridges en route that the animals stretched their necks over the cars and endeavored to take a drink out of the creeks.

## WELLAND

JUNE 28, 1929

In the afternoon of June 28th, 1929, the Michigan Central was running a fast passenger extra returning Kiwanians from their Milwaukee convention. There were about 175 people on the all steel car Limited, running Chicago to New Jersey. The train was pulled by Michigan Central engine No. 8419, a K-80 class 4-6-2 Pacific built at Montreal Locomotive Works in 1909. In the locomotive cab where Engineer James O'Dell with his fireman Roy Murrell. The train had left St Thomas at shortly after 10 o'clock that Friday morning, and raced over the Michigan Central raceway, near 1:00 o'clock the express was nearing Welland. Ahead the bridge-tender had opened the double track swing bridge over the Welland Canal to allow the passage of a lake boat. The approaching signals had been set to red, to stop, and the safety derailer automatically set. Engineer O'Dell's train passed the red signal, for some reason he hadn't noticed the signal, slammed over the connecting TH&B junction switch then the locomotive hit the derailer. The derail was set against the special and all reports state that the interlocking plant was working safely. The engine ran through the derail, thrown off the tracks, but struck another rail alongside and rerailed itself. At this moment the engine crew jumped from the cab. Engine 8419 and tender flew off the end of the track and smacked into the middle of the canal. It completely submerged in the west channel of the canal, the automatic air brakes went on, and only the baggage car hung suspended over the end of the track. Engineer O'Dell was found alive but with severe head injuries. He was loaded onto an NSC&T trolley car and taken to the Welland General Hospital where he survived. No other persons were injured. A TH&B engine at Welland pulled the coached and baggage car back from the edge. The engine was totally submerged in the west channel which allowed the swing bridge to still operate, and could therefore close. It would seem probable that it was a TH&B engine that took the train through to Buffalo. The accident however did not tie up navigation, for both north and south-bound boats could still use the east channel. If the

engine had been traveling slower and tipped over at the canal the bridge would have been unable to close. Engine 8419 and tender sat at the bottom of the canal for nearly a full month. Salvaging operations made use of pontoons to raise the tender first and it was not pulled out until the end of July. 8419 was taken to St Thomas and it was scrapped in November 1929.



BUFFALO - SEPTEMBER 1929

## THE GIRAFFE TRAIN

One of the most unusual transportation shipments of all time had to be the shipment of two giraffes from Boston to Detroit. A Detroit auto dealer, Aaron De Roy, had purchased two giraffes in Germany and he wanted to present these unique creatures to the Detroit Zoological Park. They were shipped to North America by a German steamship, and landed at Boston July 16th, 1929. They were put in quarantine for two weeks. Plans were made for the giraffes to travel over the Boston and Maine Railroad to the NYC, then to move them west over the NYC-Michigan Central Railroads through Canada. A number of complications were quickly apparent, how to get them through low bridges and the Detroit River tunnel. Special cages with collapsible tops were built on flatcars used in the past to ship cannons. July 30th 1929, the giraffes made a safe passage through Canada. The train on which the giraffes were handled was S.D.-3, one of the fast westbound symbol trains which made a daily trip between Bridgeburg and Windsor. The animals, with 27 foot long necks, were forced to duck their heads when passing under all the overhead bridges. An attendant travelled with the giraffes, and with a rope tied around their necks, pulled their heads down at the bridges. They passed through St Thomas at 2:10 in the morning. After a tedious trip through the tunnel to Detroit, they were allowed to stretch their necks and get back to normal. One of the crew members told the story that as the train passed over some of the bridges en route that the animals stretched their necks over the cars and endeavored to take a drink out of the creeks.



## KETTLE CREEK VIADUCT

CANADIAN RAILWAY AND MARINE WORLD

OCTOBER 1930

The recent retirement of an old wrought iron viaduct of the Michigan Central Railroad's crossing of Kettle Creek, just west of St Thomas, Ontario involved the construction of a new bridge embodying some rather distinctive features. However the project is also worthy of notice as it brings to light a particularly interesting record of railway bridge history covering a period of 56 years. When the Canada Southern Railway, now the Canada Division of the Michigan Central was built through southern Ontario in 1873, the deep wide valley of Kettle Creek just west of St Thomas was crossed by a timber trestle 1,402 feet long and approximately 100 feet high. The original structure was a single track frame trestle, with 14 Howe truss deck spans, 45 feet long in the central portion, where the structure crosses Kettle Creek and two county highways that intersect just north of the bridge. At the time that it was built labour was cheap, timber was plentiful and large fills were not considered economical. After about ten years service, the timber structure was replaced with a double track, wrought iron viaduct having thirty foot tower spans and forty-five intermediate spans, with an ordinary timber deck resting upon the top flanges of the girders. The length of this viaduct was practically the same as that of the timber trestle that it replaced.

By 1902 live loads had so increased that it was decided to strengthen the existing structure. This was done by the addition of three lines of girders and columns and the replacement of the timber deck by an I-beam, steel-plate ballast floor. The structure was also shortened by filling at each end to an overall length of 855 feet. With these changes, the viaduct was made to serve without further change for twenty-seven years, when complete replacement was found necessary. The wrought iron portion had been in service forty-six years.

The bridge which has been completed recently is new throughout,

except that three of the old bents in each bank-head were retained as support for the new superstructure, after being encased in concrete. The rest of the substructure consists, with one exception, of tall concrete piers, uniformly spaced to support a substructure of double-track deck plate-girder spans carrying an I-beam and steel-plate floor. Eight of these spans, resting on the new piers, are seventy-five feet long center to center of piers, while at each end, over the sloping ends of the approach embankments, there are approach spans of 52 1/2 feet and thirty feet respectively.

The design is essentially conventional, with the exception of the great height of the piers, and the large yardage of concrete involved in their construction. It was selected after due consideration had been given to several other designs, principally for the reason that it was adapted particularly to a programme of construction that would involve little or no disturbance to traffic. The Michigan Central Railroad's Canada Division carries one of the fastest and densest train schedules in the middle west, embracing several units of the New York Central's fleet of twenty hour trains between Chicago and New York. A study of train movements for a twenty-one day period in the autumn of 1928 and for a fourteen hour period from 5:30 a.m. to 7:30 p.m. showed an average daily movement of thirty-six trains in both directions. Of this number, about 85% were regular and symbol trains, the remainder being extras. The maximum daily number of movements noted for this period was forty-seven and the minimum twenty-nine. The average maximum interval between eastbound trains 3 hours 13 minutes, and between westbound trains 2 hours 15 minutes, and between eastbound and westbound trains 1 hour 46 minutes. It was, therefore, considered of prime importance that the structure be one that could be built without interference with train operation.

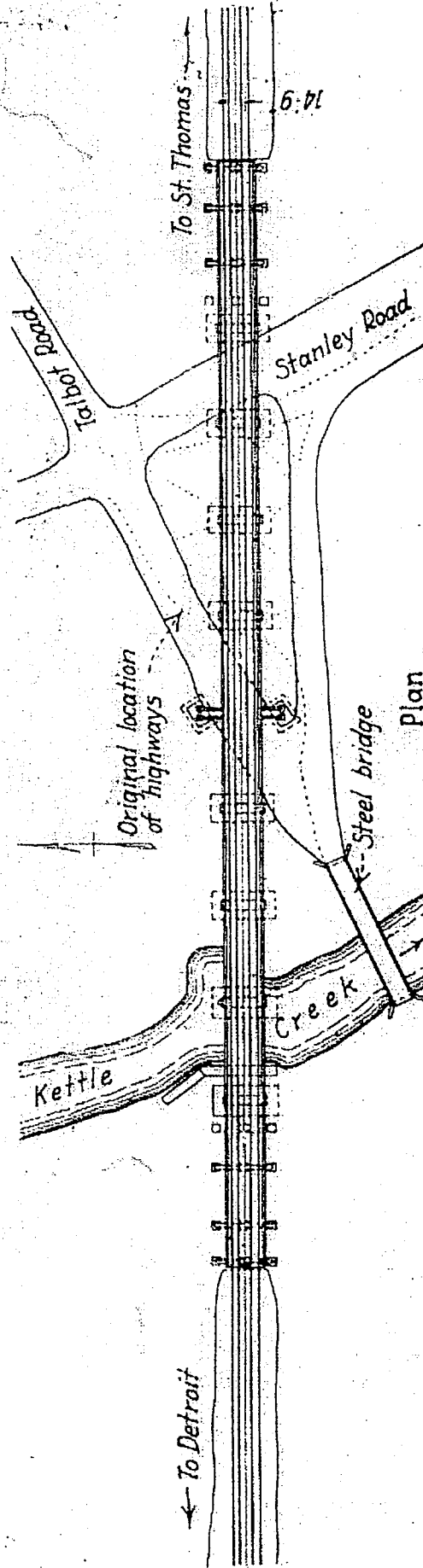
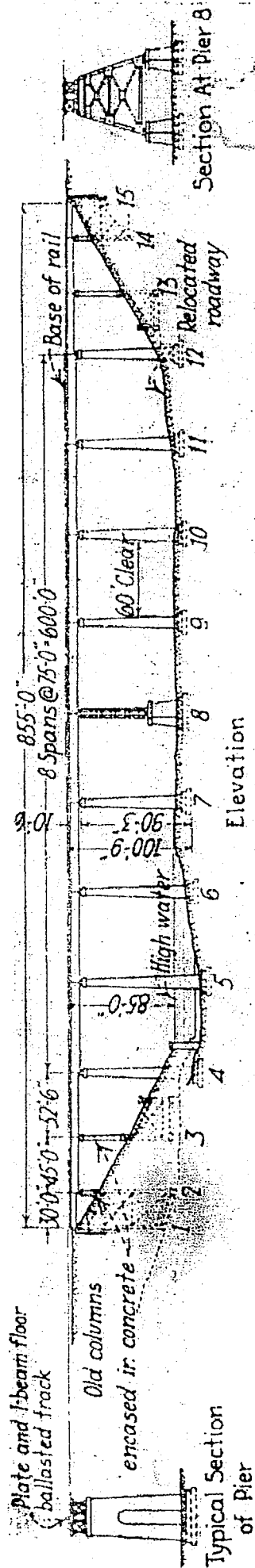
Another unusual feature of the new viaduct is the use of a structural steel bent in lieu of a concrete pier, at the exact center of the bridge. This was introduced at the insistence of city and Ontario officers to provide an uninterrupted line of sight for vehicles using an east and west highway, known as the Fingal or Talbot Road, which carries quite a heavy traffic from Detroit and Windsor to St Thomas. The posts of this bent are battered to an unusual degree so as to span a forty foot roadway. The bottom strut of the bent clears the roadway pavement by twenty-one feet. This highway

approaches the viaduct in either direction on very steep grades, crossing Kettle Creek about at the bottom of the west grade and intersecting a second highway, the London and Port Stanley Road, near the foot of the east grade. Because of this complicated highway situation it was deemed essential in the minds of certain public officers to substitute a steel bent for one of the piers.

The general contract for the work was awarded on April 25, 1929, and work on the pier footings began at once. The mixing plant and stock piles of material were located at track level east of the viaduct and north of the tracks. For the delivery of concrete to the forms, a narrow gauge track was provided, which was supported on a bench cut in the side of the embankment and on bridge timbers laid on the first tier of horizontal struts below the tops of the viaduct towers. The concrete was discharged from the mixer into the bottom-dump buckets mounted upon trucks, which were then hauled by a gasoline locomotive over the narrow-gauge track to a point directly over the forms. In this manner about 80% of the concrete in the piers was deposited without working from the deck of the viaduct. The remainder of the concrete in the piers was handled in bottom-dump buckets from the deck of the viaduct. A total of 11,245 cubic yards of concrete was placed in 101 days without delay to trains and while operating over both tracks of the viaduct.

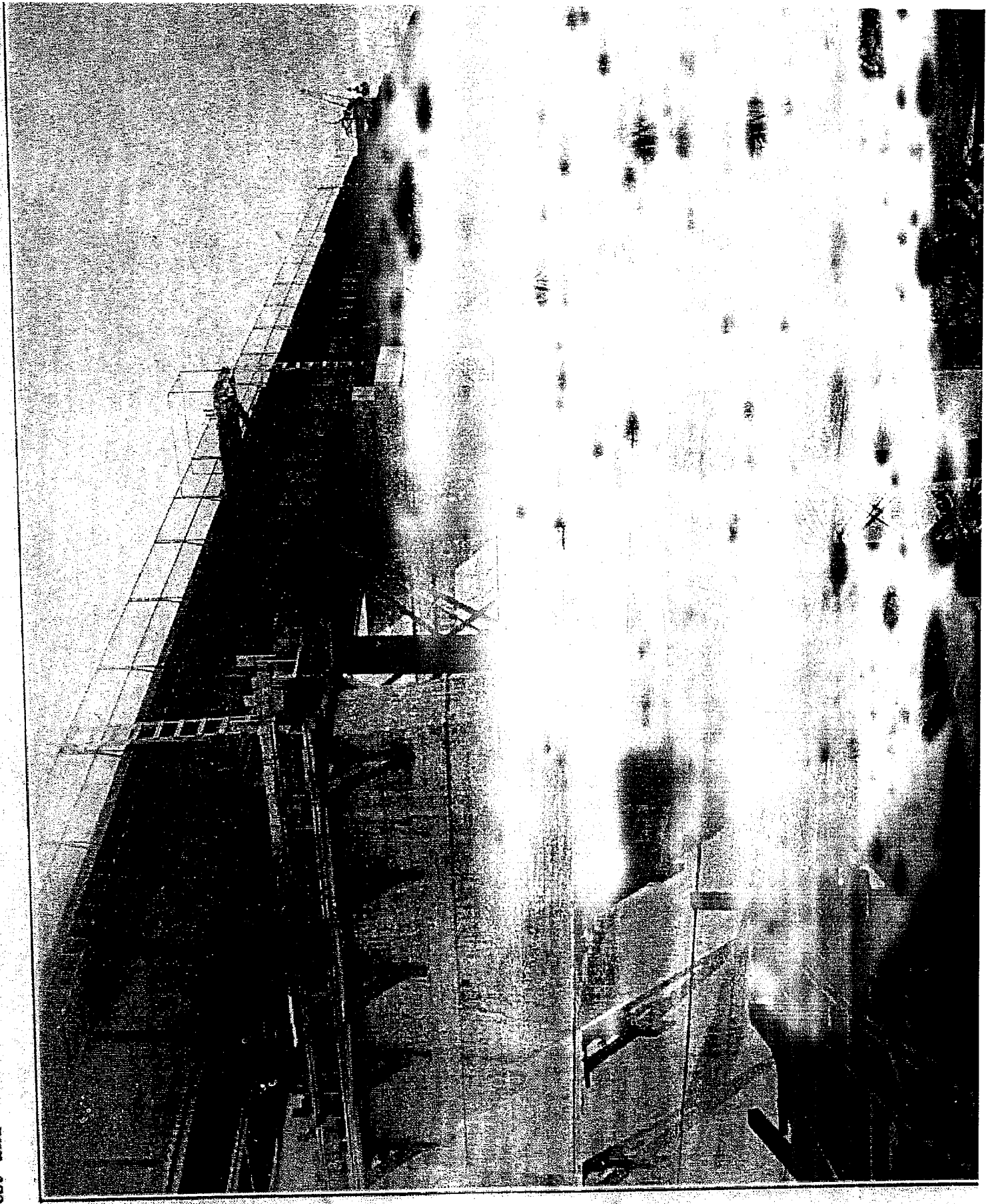
In erecting the superstructure, each single-track span was set up near the end of the viaduct, riveted and waterproofed, with the exception of one connecting floor section which was left out so that the derrick hooks could engage the top flanges of the girder. This entire span, weighing 96 tons, was then carried out on the structure by a special erection crane and lowered into position on the piers. The remaining floor section was then placed and the span was ready for the stone ballast. The erection of the superstructure of the eastbound track was started September 16, 1929 and completed October 30, 1929. For the westbound track, erection was started November 4 and completed November 29, 1929. Trains operated single track over the viaduct during the erection of the superstructure. The entire work, except final painting and the hand railing was completed on January 3, 1930.

The entire project cost \$689,000. The contract for the superstructure and erection of the superstructure was carried out by D. W. Thurston Company, Detroit, Michigan, and the steel was fabricated by Canadian Bridge Company, Walkerville, Ontario. Much credit is due these two organizations for the rapid and satisfactory manner of handling their contracts and for the high quality of workmanship that went into the new structure. The work was carried out under the direct supervision of the Michigan Central engineering department, of which J. F. Deimling is Chief Engineer and G. C. Tuthill is Bridge Engineer.



Elevation and Plan, Kettle Creek Viaduct.

est and densest train schedules in the free so as to span a 20-10. 1000000. 1000000.





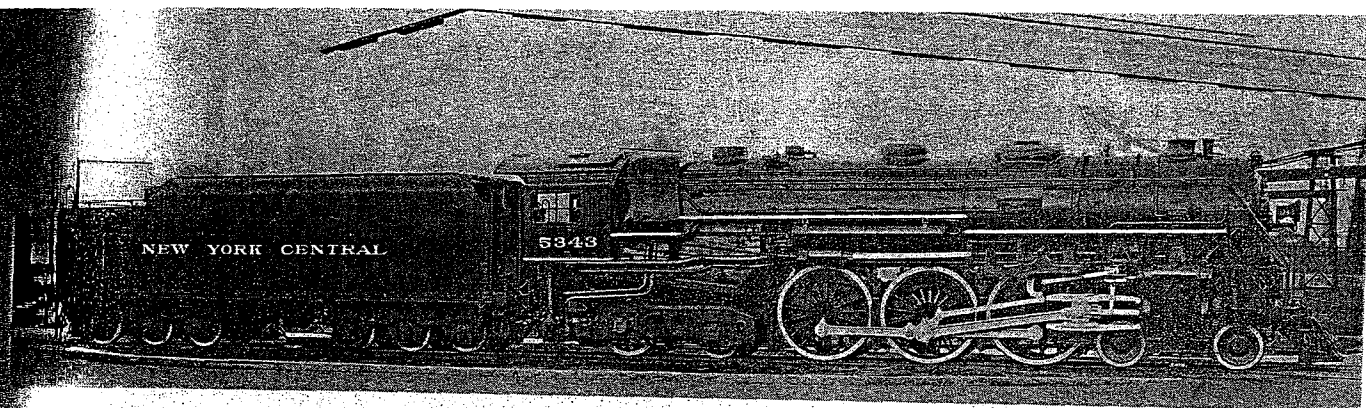
Kettle Creek Viaduct, showing Talbot Road in right foreground, and steel bent permitting through traffic on that road.

August 1930 Michigan Central Railway started the installation of a new safety feature known as Automatic Train Control. The purpose of the new device was stop a train if an engineer ran his train past a signal set against him, when the visibility might be poor or if the engineer was suddenly stricken with an illness. The system relied on two components, one instrument placed along the roadbed and operated in conjunction with the block signal system ready in use. The other mechanism was installed in the cab that controlled the air brakes of the entire train.

If the block signal should be set against the engineer and he runs his train past the semaphore the ATC apparatus installed near the rails will induce an electric current into the ATC mechanism through a pickup shoe located on the tender truck will then operate the ATC control in the locomotive cab that controls the air brakes. The train would be brought to a halt as smoothly as possible. The train can not proceed until the automatic block signal had given the engineer a clear track.

The Canadian Division was the last of the New York Central Lines, the ATC system having been employed on the other mainlines for nearly seven years. The yard engines and those used on the branch lines were not equipped with the ATC device. The Hudson locomotives in the international service running through to Harmon, New York had already been equipped with the mechanism. The installation was completed by January 31st, 1931. Specific engines from the Canadian Pacific and the Toronto Hamilton and Buffalo Railways had to be equipped with the ATC device before they could go past Welland in the Toronto to Buffalo service.





New York Central 4-6-4 Type Locomotive Equipped with SKF Roller Bearings—Built by the American Locomotive Company

# New York Central Locomotive No. 5343 Makes Over 130,000 Miles

Engine-truck, driving and tender-truck journals equipped with SKF bearings—Locomotive has 79-in. driving wheels—Tractive force, 42,300 lb.

By H. E. Brunner<sup>1</sup> and B. W. Taylor<sup>2</sup>

IN the United States anti-friction journal bearings have been successfully used by the railroads for more than 10 years and have become recognized as a useful part of the most modern equipment. The first applications were made on passenger-train cars. Some of these are now well past the million-mile mark and they have pointed the way to the development of this device for the more severe requirements of locomotive service. Long locomotive runs and high factors of availability have intensified the need for, and hastened the development of anything which would make the locomotive a better and more reliable machine.

The first anti-friction bearing equipped engine truck was placed in service some five years ago under a 4-6-2 type locomotive on the New York Central lines. It gave good results and, with some refinements of journal-box design, the same type bearings have been applied to a number of other engine trucks since that time. The developmental work has gone forward on this and other railroads as well, and some important achievements have been made.

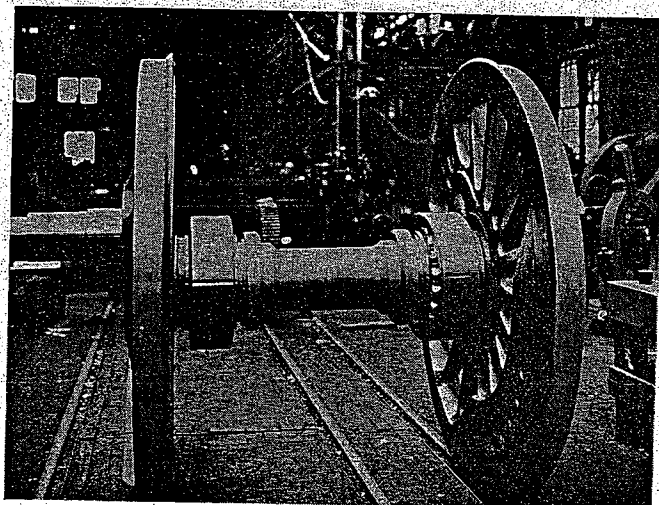
In October, 1931, the New York Central placed locomotive No. 5343, a 4-6-4 Hudson type, in passenger service. It was built by the American Locomotive Company with anti-friction bearings on the engine-truck journals, all the driving axles and tender-truck journals. This locomotive is used unrestrictedly in high-speed passenger service, handling limited trains between Harmon, N. Y., and Buffalo, N. Y., Harmon and Windsor, Ont., and Harmon and Collinwood, Ohio.

Locomotive No. 5343 exerts a main-engine tractive force of 42,300 lb. It is equipped with a Franklin

booster which has a rated tractive force of 10,900 lb., making a combined tractive force for the locomotive at starting of 53,200 lb. The boiler operates at a pressure of 225 lb. The cylinders are 25 in. by 28 in., and the driving wheels are 79 in. in diameter. The total weight of the engine is 353,500 lb., of which 189,000 lb. is carried on the driving wheels. Other principal dimensions and weights are shown in the table.

## Anti-Friction Bearings Applied to the Driving Axles

For simplicity of design, the same size journal bearing is used on all of the driving axles. It has the following dimensions: Bore, 11.4173 in.; outside diam-



Wheel and Axle Assembly With the Boxes Removed

<sup>1</sup> Chief engineer, SKF Industries, Inc., New York.

<sup>2</sup> Railway engineer, SKF Industries, Inc., New York.

Sept 24 1932

## GAS-ELECTRIC

Michigan Central Railroad acquired two gas-electric cars in late 1932 for operation on the Canada Division from J. G. Brill Company to replace steam passenger trains. Both cars had a length of 73 feet and the gasoline engine was a 6-cylinder, 4 cycle with a rating of 250 horsepower. Both cars were fitted with control for double end operation.

Car no. M-202 had Westinghouse electrical equipment, a seating capacity for 21 passengers in the main compartment and 10 in the smoking compartment and a baggage compartment 17 1/2 long and a mail compartment 17 feet long. Car M-202 operated between Buffalo and St Thomas as train No. 5, daily except Sunday, leaving Buffalo 5:45 a.m., and arrived St Thomas at 9:50 a.m. having travelled 126 miles. Eastbound the car left St Thomas as No. 2, daily except Sunday, at 2:30 p.m. and it would arrive at Buffalo at 6:40 p.m. Operation between Buffalo and St Thomas began November 28th, 1932.

Car no. M-9 had a seating capacity for 61 passengers in the main compartment and 10 in the smoking compartment, and a baggage section 14 feet long. Car M-9 operated between St Thomas and Detroit as train No. 2 leaving Detroit 5:50 a.m. and arrived St Thomas at 9:15 a.m. It would leave St Thomas as train no.5, westbound. at 5:05 p.m. and would arrive at Detroit at 8:30 p.m. Operation between St Thomas and Detroit began January 30th, 1933.

February 7th, 1938 a motor car operated on the Courtright Branch. The car left St Thomas at 10:00 a.m. on Mondays, Wednesdays, and Fridays and returned to St Thomas by 5:03 p.m. on Tuesdays, Thursdays and Saturdays. On Tuesdays, Thursdays and Saturday operated to Petrolea. In October 1940, the motor cars were replaced by a mixed passenger and freight operation with steam power.

## FOURTH OF JULY, 1932      ST THOMAS, ONTARIO

Franklin Delano Roosevelt made history July 2nd 1932 when he flew to Chicago to accept the Democratic Presidential Nomination in person at the 1932 Democratic National Convention. In his acceptance speech he concluded with the historic statement: "I pledge you, I pledge myself, to a new deal for the American people." Roosevelt would leave Chicago late at night July 3rd on the New York Central System for the trip to New York City. The train would be the newly named Exposition Flyer. The private car of T. W. Evans Vice-President of the New York Central lines was placed at the disposal of Governor and his party. There was no special train, but the party was accommodated on the newly-named The Exposition Flyer formerly North Shore Limited. At Detroit where the Limited arrived about 4:00 A.M. no person was allowed near the coach of Mr Roosevelt. There the train was connected to the electric motors and pulled through the Detroit River Tunnel emerging in the Windsor, Ontario yard. There one of the NYC Hudsons was connected to the train. FDR and party were given a speedy and somewhat secret ride over the Canadian Division. The train reached St Thomas, Ontario at about six o'clock in the morning. Only a few railroaders knew that FDR was aboard. The required crew change was made on the platform in front of the Canada Southern station. The brake test was made and in the early summer light the signals went green and off the Flyer went. Canadian crews on a New York Central Hudson on the Fourth of July, 1932 racing through Ontario farmlands to a not forgotten destiny at the Niagara Frontier. Railroad officials virtually placed an embargo on information relating to the time of the trains arrival, the length of the stop-over and the location of Roosevelt's car. It was at FDR's request that no notice be flashed ahead so when the Exposition Flyer rolled into Buffalo's Terrace station from Canada few if any persons on the platform had the slightest idea that the last car on the train with the curtains drawn held the Democratic Presidential Nominee Franklin Delano Roosevelt and his wife Mrs Eleanor Roosevelt. Now the campaign to the White House began, for ahead the notice was now given, and large crowds heralded the train at all stations.

## ROOSEVELT TRAINS

Another special Franklin D. Roosevelt train passed through St Thomas Sunday October 2nd, 1932 around midnight. The special chartered campaign train was carrying the presidential nominee back to New York State to allow him to continue his campaign for the presidency of the United States after a tour of the American mid-west. He was to make a speaking appearance at Buffalo on the Monday.

The Roosevelt special consisted of eight cars and was hauled by a large 5200 class Hudson locomotive. The engine hauled the train on its entire Windsor to Buffalo run. The train stopped briefly at St Thomas where orders were picked up. Some of the newspaper reporters on the special dropped off the train and quickly "filed" a large volume of campaign news to different parts of the United States. Over 20,000 words about the presidential campaign were sent out over the telegraph lines from St Thomas.

The train crew in charge of the train were Conductor Stewart and brakemen Coulson and Irvine. The engine crews on each division were, east end, Engineer George Williams, Fireman Cecil Moon; and on the west end, Engineer Fred. M. Little, and Fireman "Taxi" Berdan.

NOVEMBER 2, 1933. Newspaper reports that Mrs Eleanor Roosevelt wife of the President of the United States passed through St Thomas in the early morning en route to New York City. Michigan Central officials said that she did not occupy a private car but had a compartment in one of the regular Pullman's. No one except a few railroad officials and members of the train crew were aware of her presence on the eastbound Exposition Flyer.

## THE ROYAL SCOT

1933

The London Midland Scottish Railway in the spring of 1933 shipped the entire English train The Royal Scot to North America to make a tour of both Canada and the United States. It was to go on display at the great Chicago Exhibition of 1933 "A Century of Progress". The train set landed at Montreal in April, was assembled and tested, then started its tour on April 21st, 1933. The train left Toronto May 4th, 1933 and travelled west through Bayview Junction then took the Switch at Hamilton West Junction onto the Toronto Hamilton and Buffalo Railway. The red Britain arrived at the TH&B Hunter Street station that Thursday afternoon. This was at the time when the new station was under construction, therefore while the train stopped on the elevated platform, the old 1895 station was still in use and the temporary wooden stairs were needed to mount the upper platform. A crowd of nearly 25,000 persons were on hand to greet the visitor. The newspapers reported that "not since the Prince of Wales visit in 1919 visited the city had there been seen such a demonstration of such proportions and enthusiasm. The citizens proved themselves Royal Scot conscious to a degree bordering upon fanaticism. Not only did they turn out in such numbers that the area for blocks about the station was congested to the point that it was almost impossible to move forward one inch, but they bore down upon the train like an avenging army and fairly enveloped it." The reception in these depression days was large and civilized.

The next morning all Hamilton was surprised that for surprising and unexplained reasons the Toronto newspapers carried a very false story about how the Royal Scot had been vandalized by the crowd and that the doors were closed quickly and the train left town in a hurry, way ahead of schedule. There had been no vandalism.

In the cab of the engine was the LMS engine crew of Driver Gilbertson and fireman Jackson, along with a TH&B crew took the train out and ran direct to Buffalo.

## BURLINGTON ZEPHYR

The revolutionary and now historic Burlington Zephyr was a streamlined, articulated three car diesel powered train built in 1934 by Budd Manufacturing Company of Philadelphia, Pennsylvania for the Chicago Burlington and Quincy Railroad. This silver streak captured the public attention in the midst of the great depression. Its stainless steel construction gave it a weight of 85 tons and a maximum speed of 100 miles per hour. It was christened at Philadelphia April 18th, 1934 and began an extensive tour before it was placed on exhibition at the Century of Progress Exhibition at Chicago in July.

Tuesday April 31st, 1934 the world's most modern train, the fastest train, The Zephyr, ran over the Michigan Central on this day.

The run over the Michigan Central was from Buffalo to Detroit making stops at Black Rock, New York and Fort Erie, Ontario for customs examinations, and at St Thomas to allow officials to board the train as an excursion. It arrived at St Thomas at 5:00 o'clock. A surprise on this run was an collision at the first crossing east of Essex when the streamliner hit an automobile at the crossing. That crossing was protected by flashing signals, and the damage wasn't great. Interest was in the speed of the train, and the following record was kept:

Fort Erie to Welland	39 MPH
Welland to Canfield Jct.	52.2
Canfield Jct to Hagersville	57..8
Hagersville to La Salette	50.3
La Salette to Tillsonburg	48.
Tillsonburg to Springfield	56.3
Springfield to Ball	61.1
St Thomas to West Lorne	61.1
West Lorne to Fargo	59.7
Fargo to Tilbury	47.5
Tilbury to Essex	59.2
Essex to Windsor	41.1

New York Central Hudson 5414 was delivered in September 1937 from the American Locomotive Works. On the morning of January 11th, 1938, the four month old Hudson, on that Wednesday morning was hauling passenger train No. 47, The Detrouiter westbound. Hudson 5414 was suburb steam locomotive, making a daily run of six hundred miles from Harmon New York to Windsor, Ontario. In the cab of the locomotive were Engineer Gregory Hogan and his Fireman Frank McNabb both of St Thomas. There was a snow storm. Seventy miles west of St Thomas was the small station of Fletcher. Ahead of the speeding train, NYC train No. 17, The Wolverine, had developed boiler trouble and had slowed, then stopped on the westbound mainline. Switches were thrown and the signals went to Caution. The Detrouiter approaching Fletcher engineer Hogan slowed the locomotive down to about twenty miles per hour; went onto the eastbound mainline and passed the stalled Wolverine. The snow storm was heavy and blinding. The switches had been set just near the tiny flag-stop Fletcher station. Hogan was prepared to slowly enter the crossover back on to the westbound main. Going through cross-over, the Hudson jumped the track. The engine separated from the passenger cars plowed through the cinder pathway which formed a station platform, struck the west end of the Fletcher station, tearing off the telegrapher's bay window, and continued for another five hundred feet. The locomotive plowed through the snow and mud and then turned over on its side, The front of the engine was buried in the earth. Trucks were broken from the tender, which was wrenched from the engine tearing the automatic stoker from its position. Engineer Hogan was still in the cab and Fireman McNabb was thrown from the cab, they were injured, but both were alive. The engine tore down telephone line and severed a Union Gas pipeline. The passenger train had disengaged from the engine and continued five hundred feet over the tracks without leaving the rails. About two hundred feet of rail and track were torn up. There were about 173 passengers aboard and not a one was injured. The crew

were taken to the hospital cut, bruised and shaken up. The salvage operations started immediately, but the large NYC derrick had trouble pulling the engine out of the mud at such a large distance from the track. The tender was easily pulled up and re-railed; but work all day Thursday could not free the 5414. A second derrick called from Detroit managed to free the crushed and muddy Hudson. There really was not an explanation why the slow running train derailed, many of the local engine men thought that ice has accumulated in the crossover points.



# When Locomotive on M. C. R. Train Nose Dived Into the Ground



THE above excellent pictures of the wrecking of the locomotive drawing M.C.R. train No. 47, the Detroit, at Fletcher, Wednesday morning were taken by a photographer of the Windsor Daily Star, who rushed to the scene of the wreck despite the storm raging at the time. Tearing itself from the heavy train as it passed out of the siding back onto the main line after going around train No. 17, the Wolverine, stalled because of engine trouble, the big locomotive and tender toppled over after ploughing up the right-of-way. Upper left photo shows a close-up of the engine, its nose buried in the ground. It gives some idea of how miraculous was the escape from serious injury of Engineer Gregory Hogan and Fireman Frank McNabb, of St. Thomas. Upper right is the Fletcher station, showing one section ripped by the engine on its mad plunge. Lower left shows the tender resting at a crazy angle, with the upturned locomotive to the right. How the tender jack-knifed into the engine as it rolled to a stop is pictured in the lower right photo. Inset is Major Fred K. Jaspersen, Windsor lawyer, who was one of the passengers on the Detroit but was unhurt. Seated in the dining car, he was thrown into the aisle and showered with sugar and cream. The pictures are used by courtesy of the Windsor Star.

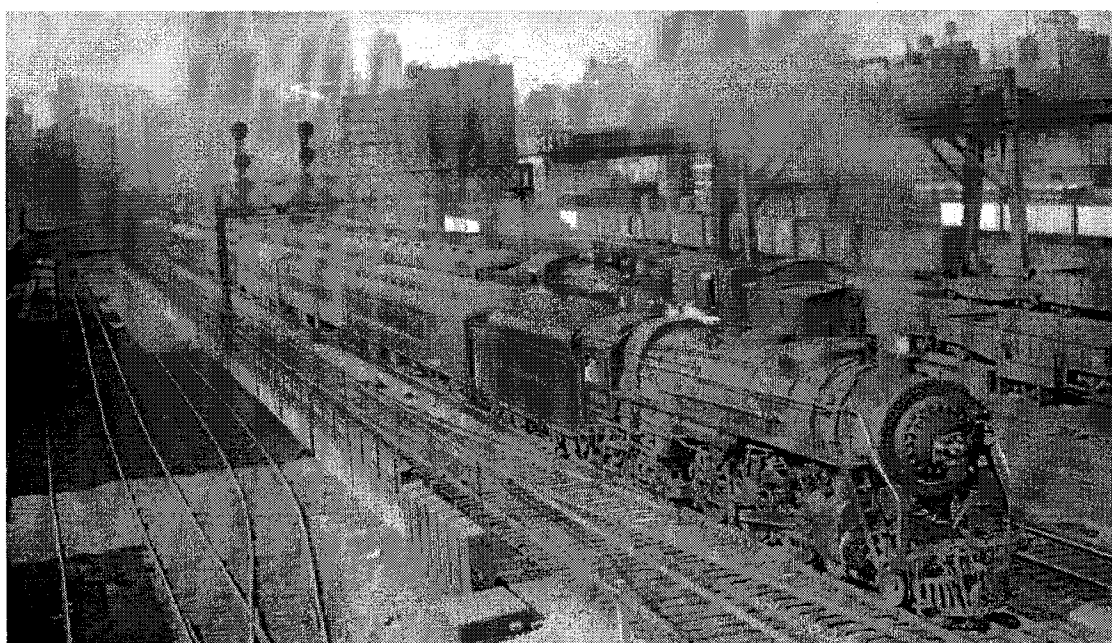
<a href="#">Home</a>	<a href="#">Browse This Collection</a>	<a href="#">Order</a>	<a href="#">Catalog</a>	<a href="#">Undigitized Photos</a>	<a href="#">WH/G Home</a>	<a href="#">Favorites</a>	<a href="#">Help</a>	<a href="#">English</a>
----------------------	--	-----------------------	-------------------------	------------------------------------	---------------------------	---------------------------	----------------------	-------------------------

Search

Search

[Advanced Search](#)[Home](#) » [Western History](#) » **NYC train, engine number 5414, engine type 4-6-4**[Reference URL](#)[Share](#)[Add tags](#)[Comment](#)[Save to favorites](#)

## NYC train, engine number 5414, engine type 4-6-4

[View Description](#)[Download](#)[Print](#)

### Description

**Call Number** OP-13607**Title** NYC train, engine number 5414, engine type 4-6-4**Title-Alternative** Other title: New York Central train, engine number 5414, engine type 4-6-4**Creator(s)** Perry, Otto, 1894-1970,**Summary** Train #10, Water Level Ltd. Photographed: leaving Chicago, Ill., August 10, 1939.**Date** 1939**Notes** Title from catalog prepared by Western History Department, Denver Public Library.; R7000136071**Physical Description** 1 photonegative ; 9 x 14 cm.; 1 photoprint : silver gelatin, b&w ; 9 x 14 cm.**Is Part Of** Otto C. Perry memorial collection of railroad photographs.**Subject** Locomotives--1930-1940.  
Railroads--Trains--Pictorial works--1939.  
Railroad locomotives--Illinois--Chicago.  
New York Central Railroad Company.**Rights** Restrictions applying to use or reproduction of this image available from the Western History/Genealogy Dept., Denver Public Library.

## CLOSELY WATCHED TRAINS

The World was at war. 1943; the railway lines were full of extra troop trains, but two Canadian Pacific extra trains deserve historical attention. The trains ran over the Oakville Subdivision and then over the TH&B to the border.

Between August 1st to the 9th, the President of the United States Franklin D. Roosevelt had a secret fishing vacation in northern Ontario. The train ran from Canpa, the CPR connection at Mimico over the CNR mainline to the TH&B connection at Hamilton West Junction.

Only less than a week later, security was at its peak, railway sectionmen were called out in the middle of the night to secure the switches along the railway. A Canadian Pacific passenger extra pulled into the CPR North Toronto station, in the middle of the night. The crews were changed under flood-lights and armed RCMP security. The train ran across the CPR North Toronto line through the West Toronto freight yards and down to the connection with the CNR. No one was told who was on the train. Once again this train left CNR rails at Hamilton West Junction for the TH&B route. The train travelled over the TH&B and New York Central Railroads to Niagara Falls. When the train pulled up to Victoria station, soon it became apparent that the passenger on board was no other than Prime Minister Winston Churchill. A quick tour of the Falls was made with his daughter Mary Churchill. The train left for the United States where Churchill met with President Roosevelt. The first Quebec Conference was then held.

## Churchill

August 1943 British, American and Canadian armed forces were victors in Sicily and the Russian army was marching west out of Stalingrad. These were historic times. At the TH&B station on August 11th new instructions arrived over the telegraph, clear the tracks that the night. Railway employees were sent out early in the morning to guard the track and to spike the switches closed. Those called out had no idea the reason. Police arrived at the road crossings and just stood on guard.

In Toronto there were a flock of rumors, Police, R.C.M.P. and railway employees mingled on the platform of the closed North Toronto station of the Canadian Pacific Railway. At 5:30 AM. a six car Canadian Pacific train pulled into the station. Hordes of security stood at their posts, Yonge Street was closed. There was no waiting, the engines were quickly changed. Engineer E. J. Griffith and Fireman Earl Du Maresq climbed up into the cab of the steam engine. The train left on the CPR freight line across the top of Toronto through West Toronto, the Lambton yards, it took the switch at Islington headed a few miles south to the junction with the Canadian National at Mimico. Quickly the special ran over the CNR lines through Bayview, then it took the switch onto the TH&B at Hamilton Junction. The train would have paused for water briefly at the Hamilton Hunter Street station. No one in Hamilton were even aware except the officials of the Toronto Hamilton and Buffalo Railway. They were secret. The TH&B extra east left, stormed up the grade through Stoney Creek to Vinemount. The Canadian Pacific train rushed through the Niagara hamlets still in secrecy. The train slowed through the Welland station and took the NYC Niagara Falls branch. The train slowed and came to a stop at the NYC Victoria Park station at the top of Clifton Hill, Niagara Falls. Despite all the top secrecy, as a small man came out on to the observation car platform, the news broke quickly. It was the Winston Churchill. The Prime

Minister accompanied by his daughter Mary Churchill descended from the train. A special motorcade took the great visitors around the Niagara points of interest for nearly two hours. Churchill then returned to his train, boarded it and the train ran out over the Niagara bridge to enter the United States. The destination would be a meeting in Washington with US President Franklin Roosevelt. The following week the famous first Quebec Conference would take place. This war time conference would lay the plans for Operation Overlord, D-Day, the invasion of Europe.

ST THOMAS

OCTOBER 12, 1942

Howard Gunning a locomotive fireman in the St Thomas terminal lost his life about 11:00 o'clock on the evening of October 12th 1942 when the yard engine on which he was working collided head-on with a large 2900 Mohawk engine. that was standing still. The Mohawk had just come off a westbound freight train and had backed to Park Avenue and was waiting for the switch to click when the yard engine came out of the number 7 track on the south side unexpectedly. The accident occurred near the First Avenue viaduct. He was killed when he tried to clear the locomotive but was crushed between the engine and the tender. The yard engine left the rails but the standing Mohawk was very little damaged.

## THE STREAMLINED HUDSON

The New York Central Hudson designed in 1926 was first produced in 1927. In 1938 the New York Central had noted industrial designer Henry Dreyfuss create an entirely new modern luxury streamlined Twentieth Century Limited.

The New York Central's most successful streamlining job was Henry Drefuss's 1938 Hudsons. Rather than conceal all of the locomotive's mechanical integrity beneath a vast expanse of metal shrouding, Dreyfuss incorporated into his design most of the familiar steam locomotive features: all the lower running gear and driving wheels, cylinders, and trailing wheels. His streamline shrouding effected only the upper region of the engine, and there it followed the lines of the boiler, thus helping to retain the traditional appearance of a steam engine. His spherical front and streamlined pilot were forceful and simply molded, except for the protruding single headlight and the bold vertical meridian that swept dramatically from the pilot to the casing that covered the domes on top of the boiler.

Ten of the Hudsons were built as stainless steel streamlined locomotives in 1938, numbers 5445 through 5445. Three of the older Hudsons 5426, 5429, and 5344 had streamlining added to match the Empire State Express. The Twentieth Century Limited and the Empire State Express ran south of the border. But during the war years this changed. The St Thomas Times-Journal is credited for detailing the arrival and departure of these magnificent steam locomotives.

January 7, 1943

While there was no actual secrecy regarding the presence of engine No. 5429, huge streamlined monster of the New York Central System, on the Canada Division of the Michigan Central Railroad, Wednesday, there is considerable speculation as to the possible operation of these engines through St Thomas on the international run between Harmon, N.Y., and Windsor. Early Wednesday morning engine No. 5429 hauled the westbound Wolverine to Windsor, and it returned at noon on the second section of No. 50, the Empire State Express. It created much attention wherever it passed in daylight, but no advance notice was given out publicly in St Thomas, it passed through here at the noon hour with only a few being aware of it.

No. 5429, which has disc wheels like all others of this series, has a bullet-shaped-nose, and it is said to be one of the engines used on the twentieth Century Limited, as well as the Empire State Express. The tender of the engine is also streamlined to harmonize with the scheme of the stainless steel equipment on these popular limiteds. The grey colour predominates. All of the boiler and outer riggings of the streamlined locomotive are enclosed according to a similar outline of the large new CNR and CPR streamlined moguls. It has the least resistance to the wind when travelling at a high rate of speed. The reason for its operation through here is not known except that all U.S. lines are hard hit for power and it is possible n that this was the only engine available for No. 17 to come from Buffalo to Windsor on Wednesday. Anyhow it is understood that a fast run was made in both directions on the sturdy Canada Division road-bed.

---

January 21, 1943. The temperature was hovering around zero, a strong east wind prevailing, accompanied by more snow. The second streamliner in recent weeks passed over the Canada Division of the Michigan Central Railroad on Wednesday. The engine was No. 5449, with a bullet shaped nose and entirely enclosed. This engine hauled the second



section of No. 50, the Empire State Express eastbound, after taking No. 39 earlier in the morning. A short time ago No. 5429 went through on Nos. 17 and 3. It is believed to be used on the Twentieth Century Limited. No. 5429 is a slightly newer model, but No. 5449 created considerable interest also. More would have seen the engine but for the bad weather prevailing.

February 9, 1943. Included in the rush of traffic over the Canada Division of the New York Central System during the past 24 hours was a section of the Twentieth Century Limited, crack NYC luxury flyer which operates regularly on the south shore of Lake Erie. The section is believed to have been operated through Canada owing to difficulties on the American side between Buffalo and Chicago. It passed through St Thomas somewhere around eleven o'clock Monday night. The big electric sign on the rear of the train announcing it as the Twentieth Century Limited could be seen at some distance. It is believed that there were about ten cars on the limited, all streamlined and similar to the high class equipment operated on the Detroit and the Wolverine. One of the large Hudson type passenger engines pulled the train.

During the past twenty-five years or so a section of the Twentieth Century Limited has passed through St Thomas a half dozen times, owing to some trouble on the four lane NYC artery south of Lake Erie. A fast freight train was said to be in the hole at Comber when the Twentieth Century sped by. It was travelling fast, but no faster than the Detroit or the Wolverine.

February 11, 1943. Two engine crews on the Michigan Central Railroad have had their chests out since early in the week when they handled the engine of the Twentieth Century Limited over the local division. On the west end, Engineer J. Hardy and Fireman L. Fowler were accompanied by Travelling Engineer William Kelly, while on the east end Engineer William Carter and Fireman Westaway were accompanied Travelling Engineer Kelly and Travelling Fireman Jack McGugan. Engine 5254 hauled the flyer.

February 13, 1943. The latest New York Central streamlined engine to go through St Thomas was No. 5426, which was used on No. 139 and No. 48 this week west and east on the division. local engine crews who n have been assigned to this type say there is little difference except in the windows. The previous streamlined engine to go through here was the 5429. On Saturday morning one of the 5400 class brought in No. 50 the Empire State Express. It was not streamlined, but it had disc wheels. The number was 5421.

November 6, 1943. It isn't often that the coal tender of a locomotive could be compared with an all steel stainless steel Pullman car or luxury coach, but that is the case with the tenders of the New York Central System streamlined engines which haul the Twentieth Century Limited. One of these huge moguls went up and down the Canada Division of the Michigan Central Railroad last Friday and Saturday morning. It was No. 5452, and although not of the monal-metal type which haul the Empire State Express between Cleveland and Buffalo, it was nevertheless a beautiful job. The engine is believed to have gone to Windsor late Friday night on No. 39, the North Shore Limited from New York, and it returned through St Thomas hauling No. 50, the Empire State Express, on Saturday morning. Just what the big "Century" engine was doing so far from home is not known, but it surely gave those of along the Canada Division a thrill. There are said to be seven of these NYC engines in service and occasionally one slips over this way. The big monal metal engines which hauls the Empire State Express are Nos. 5656 and 5429. The latter has also made a trip through here.

No. 5452 which reached St Thomas at 10:20 AM. Saturday is over one hundred feet long, and the reason that the huge tender looks like a streamlined coach is that the sides slope in and the back and top are rounded. This is done to conform with the all-streamlined train which it hauls regularly. An idea of the size of the tender can be gained from the fact that it holds 17,500 gallons of water, There are seven pairs of trucks under the tender in the following ratio: two pairs in front, three pairs in the middle; and two pairs in the rear. The two pair under the front of the

tender near the cab are entirely separate, but the others are located more closely together. There are three pairs of disc driving wheels under the engine along with a pair under the front end and another pair under the engine cab. The front end is rounded like a torpedo and all the outer riggings are enclosed.. Just how fast the engine will travel nobody seems to know.

The engine crew brought No. 50 to St Thomas Saturday right on the do. the train had made up all of its delay by the time it reached Fargo. The rest of the way into St Thomas was easy sailing. The engineer had to hold the throttle back, it is understood, otherwise he would have reached St Thomas ahead of time. There were thirteen cars on the train. The entire engine, by the way, including the trucks under the tender have Timken ball-bearing axles and in fact the engine rides as smoothly as the streamlined cars it hauls. The Times-Journal also observed the engine crew getting out of the cab and their faces weren't even dirty. The disc driving wheels are almost solid with a small hole at one point.

December 13, 1943. Another huge streamlined New York central System engine No. 5426 went over the Canada Division on Sunday morning pulling the second section of No. 50, the Empire State Express. It had disc wheels and was streamlined throughout with all the exterior devices being enclosed. A number of these big streamliners that haul the Empire State Express, the Twentieth Century Limited and other crack NYC flyers on the Lake |Shore route south of Lake Erie are getting the odd trip through Western Ontario attracting considerable attention.

January 29, 1944      Engine No. 5433 the big "streamliner" of the New York Central System, which went west to Windsor on Friday morning, hauling train No. 35, returned eastbound on Friday night, hauling No. 8 the Wolverine. The engine is one of a fleet of ten streamliners which haul the various sections of the Twentieth Century Limited, between New York and Chicago via the Lake Shore route. This series run from 5435 to 5454. There are two other streamliners, Nos. 5426 and 5429 which haul the Empire State Express, and they have also "wandered" over the Canada Division occasionally. The latter two have immense tenders, much bigger than the one regularly in service. Although all of the engine crews who had No. 5433 on Friday are not known it is understood that engineers Ed. Long and H. Dawdy, and Firemen Claypole and L. Fowler had rides on the "big fellow." And in their opinion they "ride like Pullmans."

May 8, 1944

One of the New York Central streamlined engines of the 5400 class wandered over the Canada Division of the Michigan Central Railroad Saturday night and Sunday morning. It was observed on Sunday morning hauling No. 50 the Empire Express eastbound from Windsor through St Thomas to Buffalo. It is understood that it went west to Windsor late Saturday night or early Sunday morning. The bullet-nosed engine attracted considerable attention. A number have gone through St Thomas in international service in recent months, the war being largely responsible for engines wandering wherever they are needed.

July 22, 1944

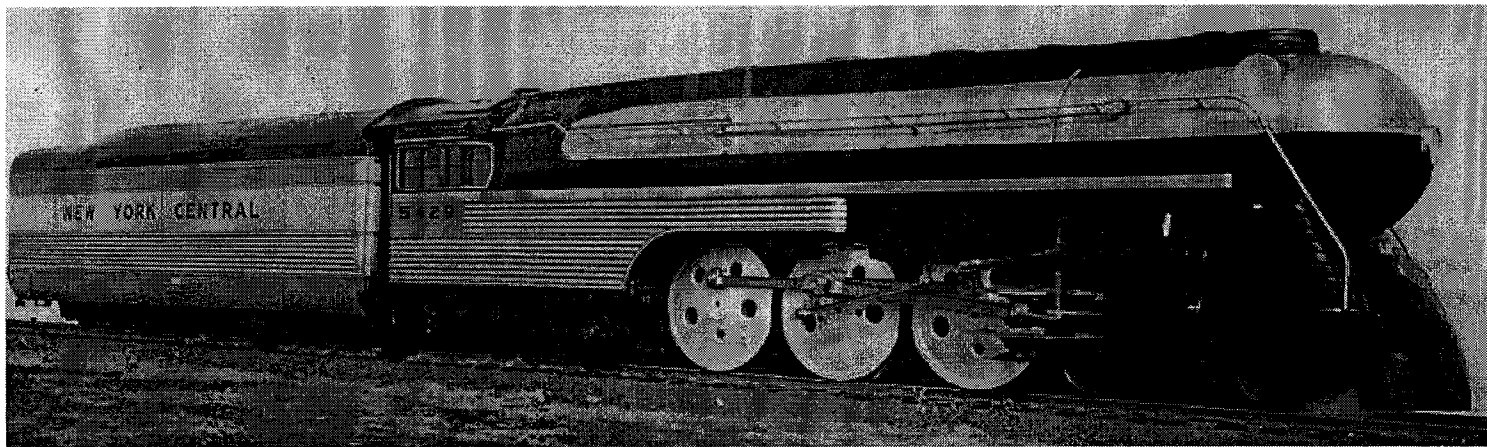
Patrons and others in the vicinity of the Canada Division of the New York Central System on Saturday morning were treated to a view of another of the system's big streamlined locomotives, engine No. 5451 hauled train No. 50 the Empire State Express on Saturday morning through St Thomas at about 10:20 o'clock, having gone west on Friday night. The big streamliner hauled thirteen cars with ease into St Thomas to the astonishment of the local citizens.

The engine had come through from Buffalo on the Friday night train No. 51. No. 51 had thirteen cars comprising seven stainless steel streamlined cars, two day coaches and four baggage cars.

At the east end of the St Thomas depot, the big locomotive on No. 50 was given the once over before proceeding to Buffalo. The fires were dumped and a quick inspection made of the train. The engine had ball bearings and disc wheels but what catches the eye is the streamlined tender. It is like a Pullman car and carries 17,500 gallons of water and 43 tons of coal. Most of the outer rigging is enclosed and the front end is bullet-shaped.

August 14, 1944            More of the streamlined New York Central engines continue to find their way to the Canada Division of the Michigan Central Railroad; which was the case again over the week-end. No. 5449 went through to Windsor, Sunday morning, hauling train No. 35 along with another big Hudson, No. 5307. The doubleheader hauled about sixteen cars. The streamliner, one of the Twentieth Century Limited engines returned Sunday night to Buffalo, New York. Another is said to have passed through Saturday night. More of them find there way over here due to the strain on the power at the U.S. terminals. It is expected that after the war a number will be assigned permanently to the Canada Division.

The stainless steel shrouds were removed from engines 5445 to 5454 in 1945, while 5426 and 5429 kept their streamlining until 1950.

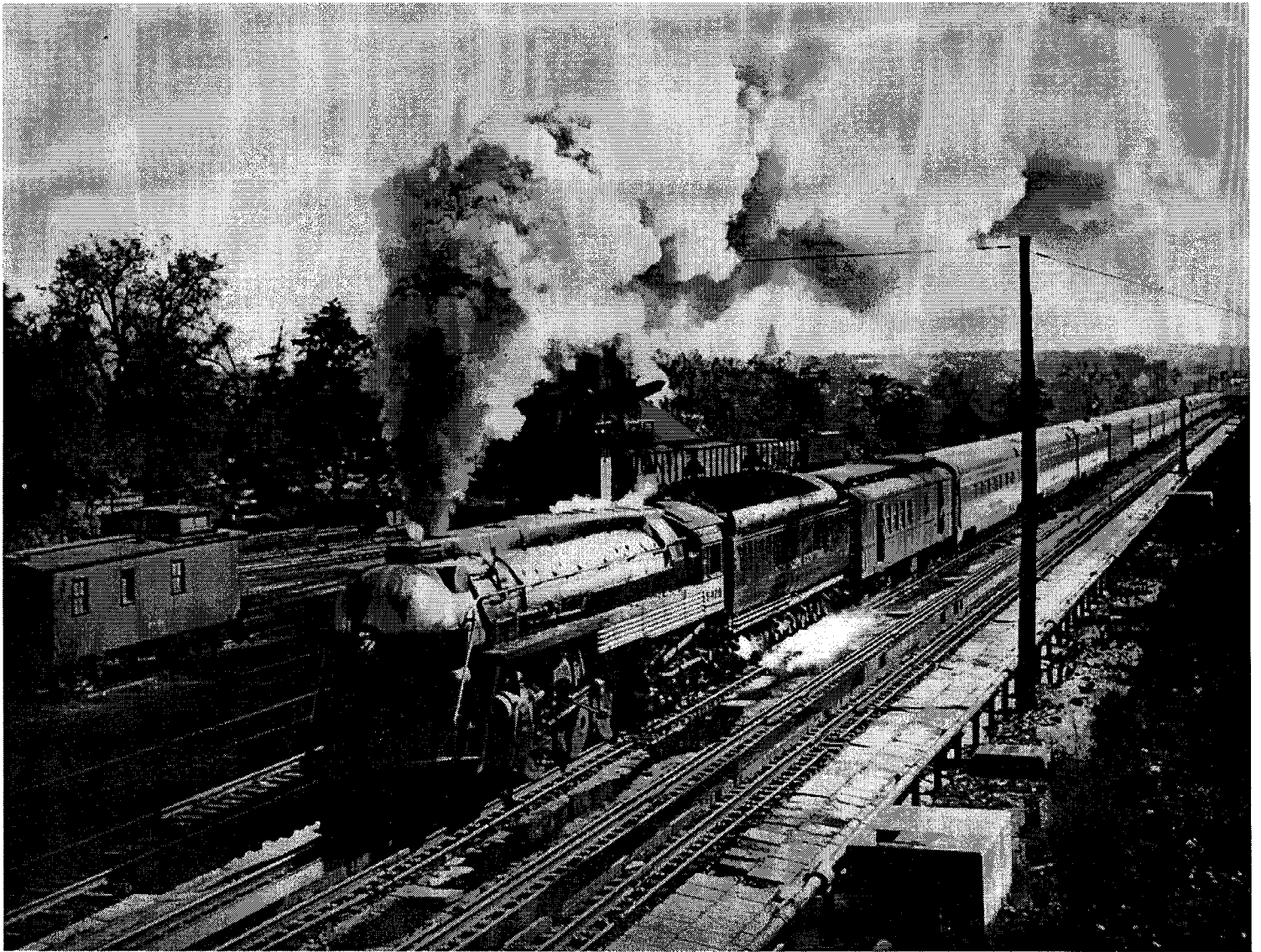


5429



5426





5426

On train No. 51, the eastbound section of the Empire State Express one Sunday night in July 1945 there was a double-header hauled by 5360 and 5370. Sometime before it was observed No. 51 had a double-header hauled by Nos. 5373 and 5371, while No. 35 had two "5300" engines. International engine 5364 that week had to go through the St Thomas shops. One of the rarest sights was to see two engines together with consecutive numbers. The NYC on one train had 5366 and 5367 hauling a long train westward out of St Thomas.

## TOWNSEND CENTRE

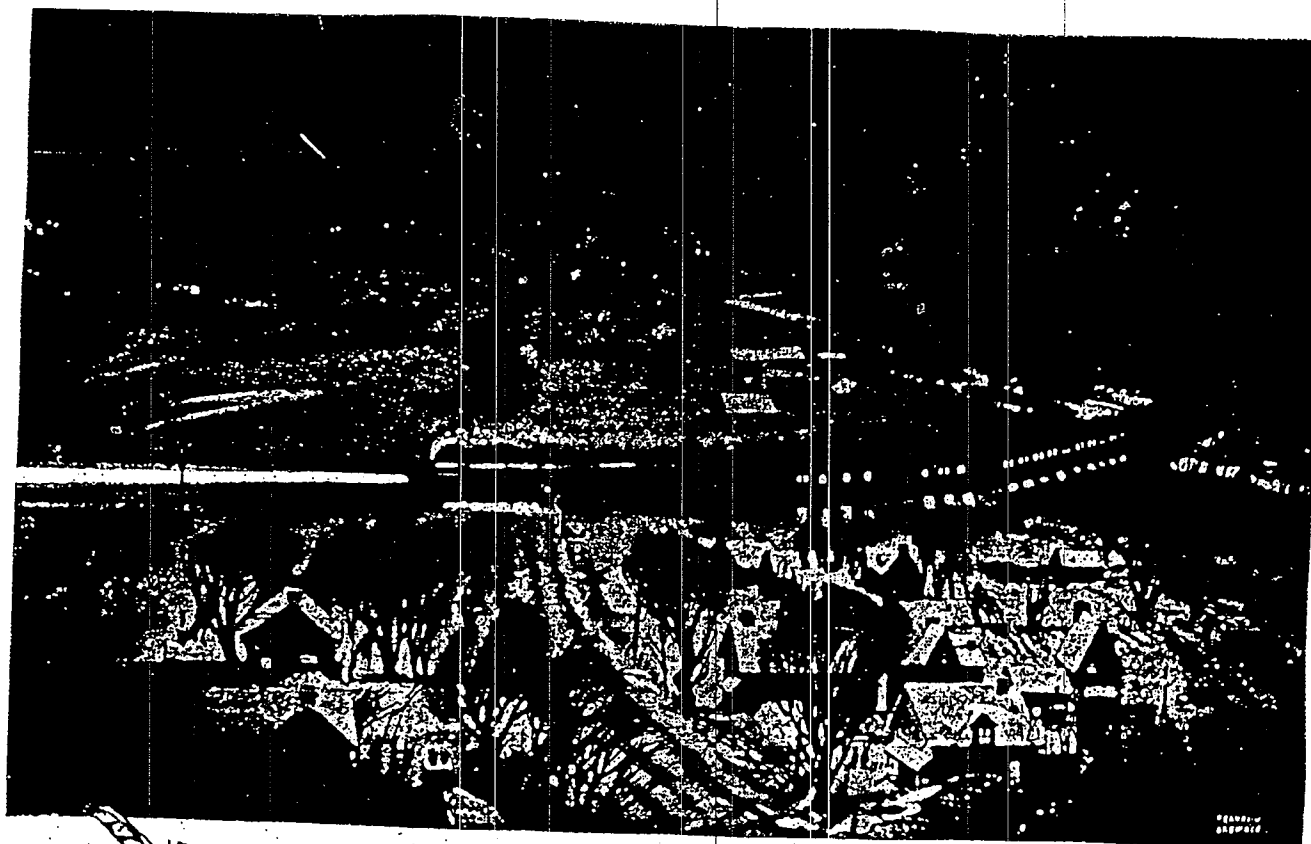
JANUARY 27, 1944

In the afternoon of January 27th, 1944 a Michigan Central freight train had to make an emergency stop a quarter mile east of Townsend Centre due to a hot box, an overheated axle bearing. The Conductor and rear-end brakeman had left the caboose and were on the ground probably involved in the hot box situation.

Following closely was a Pere Marquette freight train running on the M.C.R. Unaware that the leading freight had stopped Engine Hebert Barnes sighted the standing train after rounding a curve only half a mile distant but the weight of his train made it impossible for Barnes to stop the P.M.R. train in time and he was forced to jump from the engine and he rolled thirty feet down the embankment. Fireman Sam Gilcrest and Brakeman Lehman Balston jumped from the other side of the engine.

The Pere Marquette locomotive ploughed into the caboose of the standing Michigan Central train jumped the rails, left the right of way and was turned around with its front end torn off.

Townsend Centre is half way between Waterford and Hagersville.



# WAR WHOOP

## 1943 MODEL

YOU HEAR IT at all hours . . . that long-drawn cry of the locomotive whistle. It's the war whoop of the railways.

It may be a troop train speeding to keep a date with a convoy . . . it may be a long freight loaded with tanks, guns and other materials of war, many of them built by the railways themselves . . . it may be another week's supply of raw materials to keep a war plant in production, or food, fuel and other essentials for the home front.

It is the war whoop of Canada's greatest war industry -- the railways, which are serving the nation as effectively in war as in peace. Only the railways can furnish mass transportation on such a scale.

Your railways were ready . . . ready in war, so that Canada could strike with all her might. They will be ready in peace again to serve a greater Canada . . . rolling ever forward on highways of steel.

IF POSSIBLE  
AVOID TRAVEL OVER  
WEEKENDS AND  
HOLIDAYS

CANADIAN RAILWAY FREIGHT RATES ARE THE LOWEST IN THE WORLD

CANADIAN NATIONAL



CANADIAN PACIFIC

*Carrying the load in War and Peace*

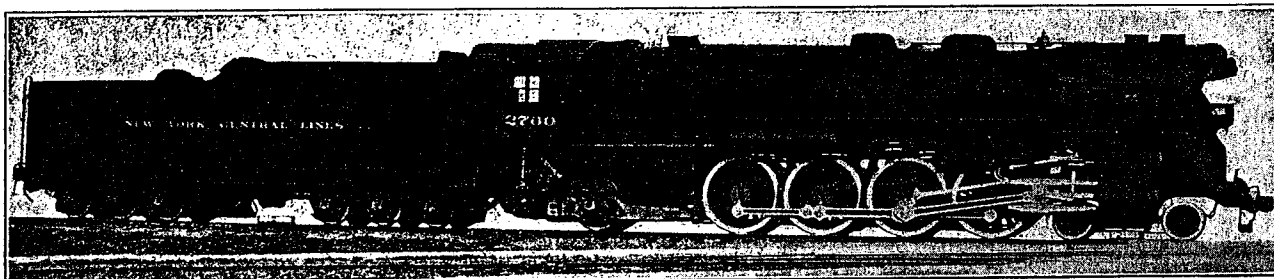
## THE MOHAWK'S

The New York Central named their 4-8-2's the Mohawk type. While the first were delivered in 1916 it was the 2900's built in 1929 that migrated to the Canada Division.

The 2900-2999 were built by Alco in 1929. These were very modern dual service locomotives. Fat boilered with long tenders, Elesco feedwater heaters, they ran on 69" drivers so that they could haul long trains fast.

During the Second World War these huge engines hauled immense trains over the Canada Division. These engines ran in international service between Harmon, New York and Windsor, Ontario.

In 1945 without explanation they just stopped coming through to Canada. Instead the Canada Division returned to the 2000 class Mikado's with smaller drivers and slower speeds. But on August 8th 1946 the St Thomas Times reported that the "wanderers" the 2900's were back, when 2991 was seen at St Thomas. Local officials expected that more of these excellent engines would return. At the time these officials said that some types of NYC motive power like the 3000's had never come to Canada.

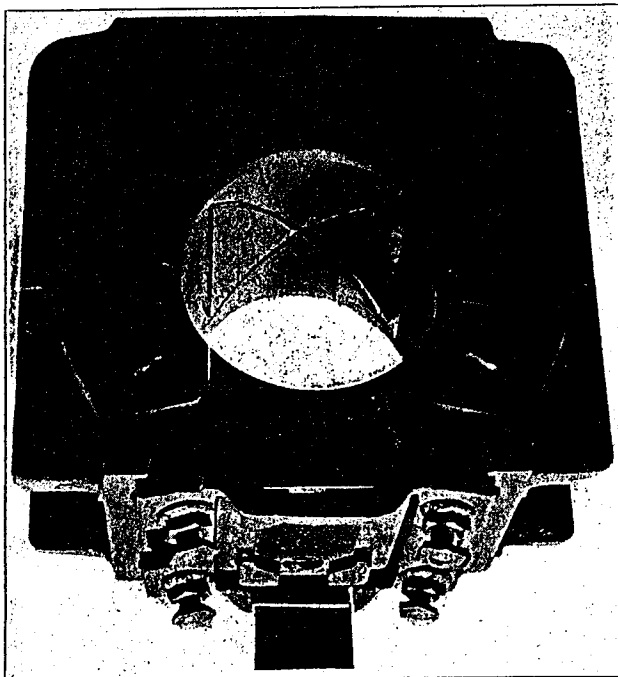


Locomotive of the 4-8-2 Type Built for the New York Central by the American Locomotive Company

## 4-8-2 Type Locomotives for N. Y. C.

*Designed for handling heavy trains over the Mohawk division between Albany and Syracuse*

**A**BOUT ten months ago the American Locomotive Company delivered a 4-8-2 type locomotive to the New York Central for use in heavy freight service over the Mohawk division between the Selkirk engine terminal, near Albany, N. Y., and the Minoa terminal, located about eight miles east of Syracuse, N. Y. This division is a low grade line, the traffic requirements being



View of Main Driving Box Equipped with Supplemental Bearings

such as to take a locomotive that will maintain a high sustained tractive force at speeds. To meet these conditions, locomotive No. 2700, was designed to handle maximum trains over this division at speeds corresponding to traffic requirements. No restrictions were placed by the railroad on the builders in the design of this locomotive, except to use as many New York Central standards as possible and to conform to certain axle loads.

The required maximum sustained horsepower was ob-

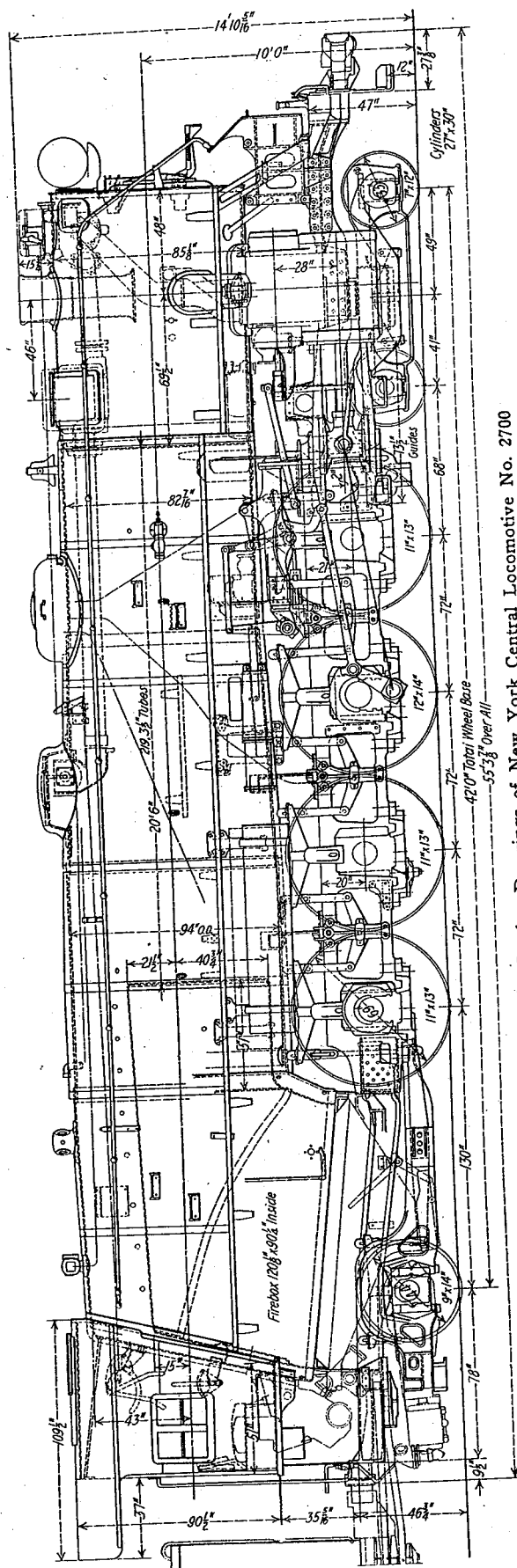
tained by the use of a boiler having ample proportions, a firebox of ample heating surface and volume, and the application of the latest design of feedwater heater and superheater, together with the application of a stoker. Driving wheels 69 in. in diameter were used instead of 63 in., as commonly used in freight service with a view better to meet the requirements of a river grade line. As a result of the performance of locomotive No. 2700, 99 locomotives of similar design have been ordered, making a total of 100 of this type, which will eventually be placed in operation on the New York Central system.

One of the problems in the design of modern locomotives is to secure a satisfactory distribution of the weight over the engine wheel base. Locomotive No. 2700, is equipped with an Elvin stoker and a trailer booster. The location of the Elesco feedwater heater in its customary place on the smokebox front in a measure tends to balance the concentration of weight at the rear end. The location of the two cross compound air compressors in front of the cylinders and the front end throttle, which is located in front of the stack, are further aids in improving weight distribution.

The designers have also assisted in obtaining a more satisfactory weight distribution through the construction of the engine truck. Referring to the elevation drawing, the reader will note that the truck center pin is 2 in. in the rear of the center line of the trucks and also that it is 6 in. back of the transverse center of the cylinders. This arrangement places a greater weight on the rear engine truck wheels than on the front which facilitates the guiding action of the truck and also shifts a greater proportion of the total weight of the engine on to the truck itself.

As shown in the table, these locomotives develop a rated tractive force of 60,000 lb. without the booster. With the booster an additional tractive force of 12,700 lb. is acquired, making a total of 72,700 lb. The total weight of these locomotives is 359,000 lb., of which 240,500 lb. is carried on the drivers, 58,000 lb. on the trailing truck and 60,500 lb. on the engine truck.

The boiler of these locomotives is of conical construction. As stated in a preceding paragraph, the design is of ample proportions which is an important factor in the increased capacity of these locomotives. The area of the grate is 75.3 sq. ft. The heating surface of the firebox and combustion chamber is 320 sq. ft. and the total evaporative heating surface of the boiler is 4,451 sq. ft.



Elevation and Cross-Section Drawings of New York Central Locomotive No. 2700

The boiler is equipped with a type E superheater. The total superheating surface is 1,985 sq. ft., making a total combined evaporative and superheating surface of 6,436 sq. ft. Ready access to the unit bolts of the superheater is provided by a manhole located at the rear of the stack as shown in the elevation drawing. All the flues are of cold drawn, seamless steel, of which there are a total of 219, all  $3\frac{1}{2}$  in. in diameter. The pipes from the feed-water heater are placed inside the smokebox which secures a better exterior appearance without greatly lessening the accessibility via the smokebox door.

The cylinders are of cast steel, the use of which material reduces the weight by 2,500 lb. The diameter is 27 in. and the stroke is 30 in. The design of these cylinders follows the usual conventional style of cast iron construction. The valves are of the piston type, size 14 in., and have a maximum travel of 9 in. They are actuated by a Baker valve gear, arranged to give a maximum cutoff of from 82 per cent to 84 per cent. This cutoff has been found to give the most satisfactory results at the relatively high speeds at which this locomotive is operated. The locomotive is equipped with a single exhaust pipe having a  $7\frac{1}{4}$ -in. nozzle.

The main driving boxes are equipped with supplemental bearings designed for use on high powered locomotives. An idea of the construction of the boxes can be obtained by referring to the view shown in one of the illustrations. This type of main driving box was originally developed to withstand the severe service encountered in locomotives of three-cylinder design. It will be noted that additional bearing surface is provided below the center line of the journal which tends to eliminate excessive wear at the bottom edges of bearings of the ordinary type.

This engine is equipped with the standard New York Central 12-wheel tender. It has a Commonwealth cast steel frame and six-wheel trucks, equipped with clasp brakes. The tender is also provided with a water scoop in accordance with New York Central practice. The tank is of the water leg type having a capacity of 15,000 gal. of water and 18 tons of coal.

PRINCIPAL DIMENSIONS, WEIGHTS AND PROPORTIONS OF THE NEW YORK  
CENTRAL 4-8-2 LOCOMOTIVE

Railroad	New York Central
Builder	American Locomotive Company
Type of locomotive	4-8-2
Service	Fast freight
Cylinders, diameter and stroke	27 in. by 30 in.
Valve gear, type	Baker
Valves, piston type, size	14 in.
Maximum travel	9 in.
Outside lap	$1\frac{1}{2}$ in.
Exhaust clearance	0 in.
Lead in full gear, constant	$\frac{1}{8}$ in.
Weights in working order:	
On Drivers	240,500 lb.
On front truck	60,500 lb.
On trailing truck	58,000 lb.
Total engine	359,000 lb.
Tender	275,000 lb.
Wheel bases:	
Driving	18 ft. 0 in.
Total engine	42 ft. 0 in.
Total engine and tender	84 ft. 7 in.
Wheels, diameter outside tires:	
Driving	69 in.
On front truck	33 in.
Trailing truck	44 in.
Boiler:	
Type	Conical
Steam pressure	225 lb.
Fuel, kind	Bituminous
Diameter, first ring, inside	82 in.
Firebox, length and width	$120\frac{1}{4}$ in. by $90\frac{1}{4}$ in.
Combustion chamber, length	51 in.
Tubes, number and diameter	39- $3\frac{1}{2}$ in.
Flues, number and diameter	180- $3\frac{1}{2}$ in.
Length over tube sheets	20 ft. 6 in.
Grate area	75.3 sq. ft.
Heating surfaces:	
Firebox and comb. chamber	320 sq. ft.
Arch tubes	36 sq. ft.
Tubes and flues	4,095 sq. ft.
Total evaporative	4,451 sq. ft.
Superheating	1,985 sq. ft.
Comb. evaporative and superheating	6,436 sq. ft.
Special equipment:	
Superheater	Type E
Feedwater heater	Elesco
Stoker	Elvin

Engine truck	Commonwealth
Trailing truck	Delta B.
Tender:	
Water capacity	15,000 gals.
Fuel capacity	18 tons
General data estimated:	
Rated tractive force, 85 per cent	60,000 lb.
Rated tractive force, with booster	72,700 lb.
Cylinder horsepower (Cole)	3,640 hp.
Weight proportions:	
Weight on drivers + total weight	
engine, per cent	67
Weight on drivers + tractive force	4.02
Total weight engine + comb. heat	
surface	55.8
Boiler proportions:	
Tractive force X dia. drivers + comb.	
heat, surface	645
Firebox heat, surface + grate area	4.25
Firebox heat, surface, per cent of	
evap. heating surface	7.18
Superheat, surface, per cent of evap.	
heating surface	4.45



# Diesel - Electric Locomotives Haul Extra N.Y.C. Trains as Result of Wreck Near Toledo

*August 12, 1946*  
**Double-Unit Mogul Moves Silently With Heavy Freight  
Train; Twentieth Century Also Pulled by Streamlined  
Diesel; Some Dozen Extra Trains in All**

Once again the Canada Division of the New York Central System (Michigan Central Railroad) came to the rescue of the "south-of-the-lake" officials and moved a tremendous volume of extra passenger and freight business due to a wreck near Toledo, Ohio, west of Detroit. One of the first freight trains to move over the division on Sunday afternoon about 4:30 o'clock was hauled by a huge double-unit Diesel-electric locomotive numbered Nos. 1601 and 2401. This type of engine can operate through the Detroit-Windsor tunnel, and No. 1601 came through Sunday with ease and is said to have hauled the freight train from Windsor to St. Thomas in two hours and five minutes. There were 67 loaded cars of freight on the train and it rolled into St. Thomas with the ease of a streamlined passenger flyer. There was no smoke and little noise from the engine. A number of bystanders got a glimpse of the freight engine of the future but unfortunately the freight train operating on the east-bound main line track pulled right down on the main line with the engine at the First avenue overhead bridge. A few sped in their cars to get a closer look-see of the big mogul.

## Only First of Process'on

The front of the double-unit engine was streamlined and gayly-colored but the rest of the engine was only semi-streamlined. The roller-bearing journals could be seen easily and under the two units where there was a series of trucks. Albert Waters was the engineer on the head end of the unit from Windsor to St. Thomas, while Conductor W. Rose was in charge of the train with brakemen Sharkey and L. Erwin. Other engine and train crews took the train east from St. Thomas to Black Rock. This train was only the first of a procession of freight trains over the division to by-pass the Toledo wreck. At the same time, five passenger trains were run from Detroit to Buffalo, including the Twentieth Century Limited, The Pacemaker, the Commodore Vanderbilt, Water Level Limited, Advance Commodore Vanderbilt, and other well-known luxury trains of the Lake Shore route of the New York Central System between Buffalo, Cleveland and Chicago. One of the passenger trains was also hauled by a Diesel-electric engine. The operation of these extra trains kept many more crews busy as the regular travel on the division was heavy. Early on Sunday afternoon light engines were sent to Windsor to protect the rush. A day coach to accommodate crews had to be dispatched as well. There were no extra N.Y.C. westbound passenger trains operated. About a dozen passenger and freight trains in all were run.

It's only about a month ago that the officials here came to the rescue again when a wreck occurred just west of Buffalo. About the same number of trains were detained at that time over a period of 24 to 48 hours. The trains, some with their own ultra-modern streamlined engines, attracted considerable attention over the division. Fine performances with the minimum amount of delay were recorded over the division and at all terminals. There was little interference with the regular scheduled passenger trains on the division during the past 24 hours but there appeared to be a train or two about every half-hour or so during the several hours that the rush was on. The fine performances reflect great credit upon the officials and employees. Percy W. Hankinson, trainmaster, and other officials, were on hand at the St. Thomas terminal to greet the Diesel-electric freight engine and other trains which followed.

## Passenger Diesels, Too

Two sections of the Twentieth Century Limited through here east-bound were hauled by Diesel-electric locomotives which came through the tunnel from Detroit to Windsor. The numbers of the engines were 4000 and 4001. Both trains were entirely streamlined as were most of the others. Originally six eastbound and six westbound passenger trains had been expected but this number was cut to five eastbound flyers and the westbound flyers were canceled. It is understood that the Toledo wreck was cleared up more quickly than believed possible and the trains going westbound were able to get through on their own tracks. The freight locomotive of the Diesel type which went through is 5,400 horsepower and was designed and built by the Electro-Motive Division of General Motors Corporation, La Grange, Ill.

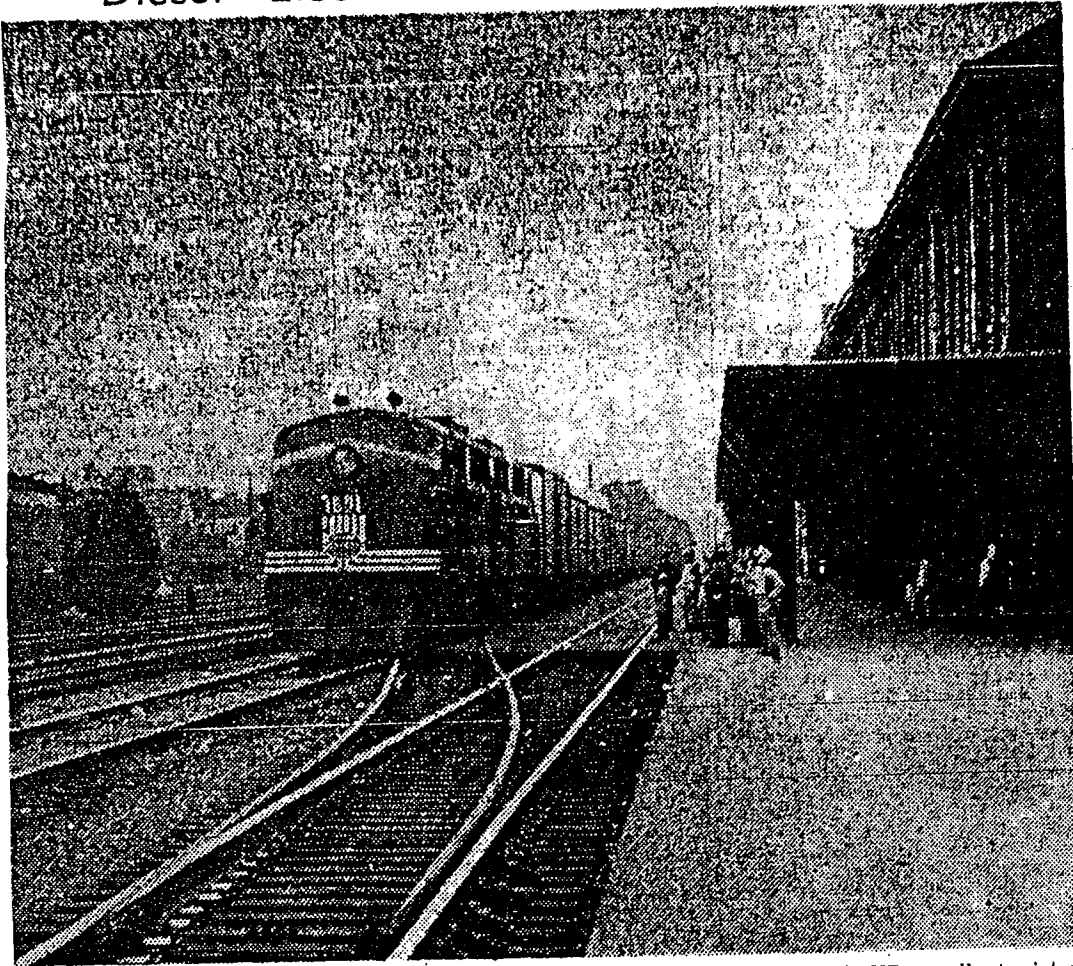
## Can Travel 65 M.P.H.

Although there were only two units on the one through here the complete "1600" class has four units-comprising two cab sections and two booster sections arranged for double end control from either cab. It has a maximum speed of 65 m.p.h. with safety and is equipped with infinitely variable speed electric brake which utilizes the traction motors for braking action, dissipating the electric current so generated through the resistance grids located in the roof of the engine. This electric brake will develop a maximum braking effort of 98,000 pounds at 17 m.p.h. and is capable of holding a large tonnage train on the long, mountainous grades without application of the ordinary air brakes. The double-unit engine through here Sunday looked like two Pullman cars and operated just as smoothly in the opinion of members of the crews.

ST. THOMAS, ONTARIO, THURSDAY, AUGUST 15, 1946 —SIX'

# CALL FO

Diesel - Electric Locomotive in St. Thomas



THE ABOVE excellent picture of New York Central diesel-electric engine No. 1601 was taken by Don McDougall, Redan street, last Sunday, as it pulled into the Michigan Central Station at St. Thomas after it had pulled a train of 67 loaded freight cars over the 111 miles from Windsor to St. Thomas in two hours and five minutes. The engine and train, as well as other trains, was detoured via Windsor and Buffalo to by-pass tracks blocked by a freight wreck near Toledo. In charge of the train from Windsor to St. Thomas was Conductor W. E. Rowe. The engine originally comprises four units but only two units was sent with the above train. It attracted much attention along the division, as well as when passing through St. Thomas. Steam locomotive can be seen in the background.

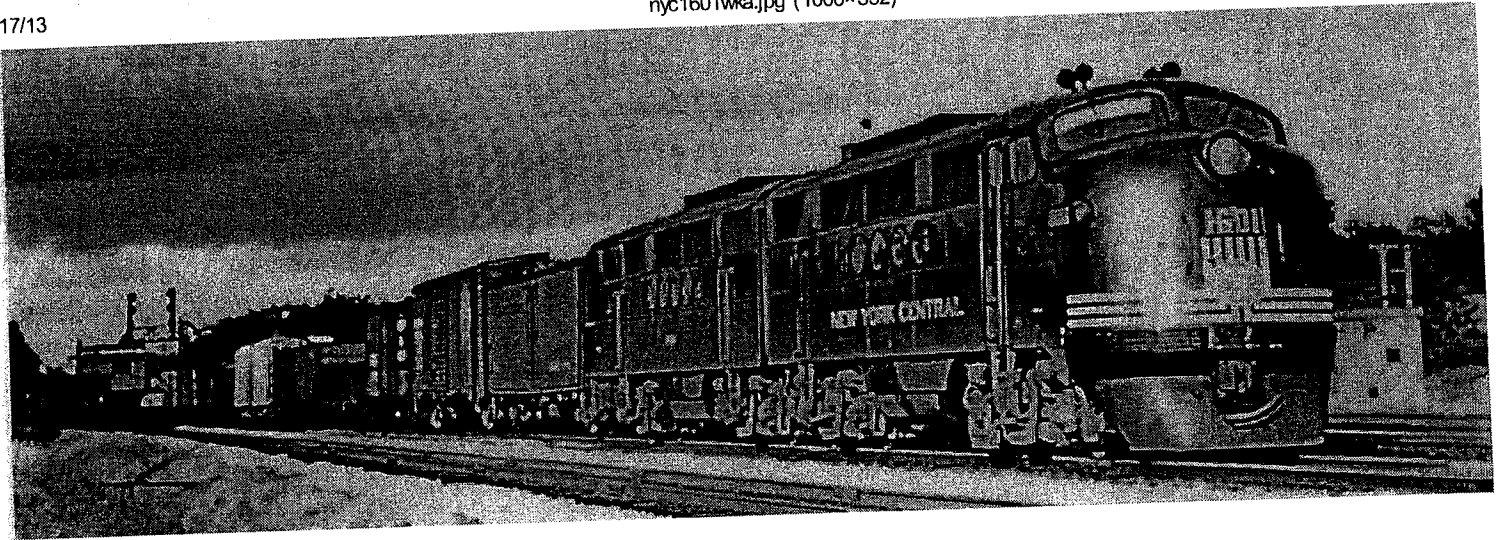
6/17/13

nyc1601ass.jpg (1200×472)



6/17/13

nyc1601wka.jpg (1000×332)



## DIESELS

In the fall of 1946 freight Diesels moved up and down the Canada Division going through the Detroit River Tunnel as far as Little Island, Illinois and back through Canada and Buffalo and as far as DeWitt, New York. It was thought that passenger Diesels would have been in service by the end of 1946 but there was a large labour problem, a massive coal labours strike in the United States under the leadership of John L. Lewis disrupted all rail transportation. The freight Diesels were taken off the local freight runs.

By February of 1947 the New York Central was receiving more new Diesels from a variety of locomotive builders. Sixty-six new Diesels had been ordered from three builders in the fall of 1946 to be added to the twenty-two road Diesels the railway already owned. Forty-six of these units are the "A" or cab engines; and 20 would be "B" units without controls. The railway already owned 250 Diesel electric in yard and switching service. The implication of Dieselization was being worked out with not only the officials but Engineers and Firemen were attending special classes in Diesel operation.

Sunday, March 30th 1947 Diesel freight engines returned to Canada Division. Two Diesels went through westbound in the morning and the other in the evening. One returned after midnight Monday hauling C.D.-4, the fastest freight limited on the division's schedule. One of the westbound freight trains hauled by a Diesel Engine was M.C.-1. The trains were about 65 cars and went over the division at 45 miles per hour.

Wednesday April 15th, 1947, "Ahead of time" was the comment of the divisional superintendent Thomas Coughlin that morning when a Passenger Diesel pulled No.17 the westbound section of the Wolverine. No. 17 that Wednesday morning was hauled by a double unit job numbered 4014 and 4015. It ran in ahead of time and its operation was faultless. It ran through the Detroit River Tunnel and on to Chicago without the traditional engine change at Windsor. On the east end coming in was Engineer Peter D. McCurdy and Fireman Ray Watters, and on the west end it was Engineer Henry Osborn and Fireman Earl Smith.

The Diesels were sailing along by April 19th of 1947 a local newspaper reported. passenger and freight Diesel-electric locomotives were quite common on the Canada Division hauling trains Nos. 17 and 8 and the freight C.D.-4. The crews reported they operate smoothly, that they start and stop with little jerking. Among the first Diesel crews were Engineers, Henry Osborn, T. Tyrell, Fred M. Little and Firemen Earl Smith, Mac McLean, Clay Pole and Roy Watters. The Diesel units are numbered 4014, 4015, 4016 and 4017, passenger E-7 models.

Two days later on Monday the 21st, Diesel operation expanded No. 39, the westbound North Shore Limited, was hauled by two Diesel units, and No. 50, the eastbound section of the Empire State Express, was hauled by two Diesels, returning later from Detroit. Trains Nos. 17 and 8 were being hauled by Diesel engines as well as the important freight trains like V.D.-4.

The next day, April 22 1947, eight different Diesels were reported passing over the Canada Division hauling the fast passenger flyers. The Wolverine, The North Shore Limited and The Empire State Express all running Detroit to New York via Buffalo would be permanent Diesel streamliners. On one trip the Empire State Express was running at 74 miles per hour. The numbers of the Diesel units passing on the Canada Division were: 4016, 4017, 4021, 4022, 2013, 4012, 4003, and 4002.

April 23rd, the New York Central System announced that the railway was constructing a big "super-service center" to re-fuel the railways Diesels. A large 200,000 gallon steel tank was being built near the Buffalo Central Station to feed by underground pipeline a dozen fuel pumps located at the east and west ends at the Central Station.

Engines 4018, 4004, 4100, 4021, 4022, 4009, and 4105 were reported successfully operating through St Thomas May 2nd, 1947.

June 6th 1947 the Canada Division of the New York Central System once again came to the rescue of the four track mainline south of Lake Erie, due to a fatal accident at a grade crossing, at Huron Ohio. Engineer James Williams was killed when the engine re-railed and eleven passenger

cars of the westbound Interstate Limited were thrown across all of the four mainline tracks. Ten extra passenger flyers, including the 20th Century Limited and numerous freight trains were routed on a detour through Canada. The Twentieth Century Limited came through St Thomas with three Diesel Engines. Officials in St Thomas worked through the night setting up schedules and train crews necessary for the safe operation of all the passenger and freight traffic, on nearly all the through Chicago to New York; New York Central System. In order to get men at the borders to handle these new trains, a light engine and a single coach were dispatched to Windsor with train crews from St Thomas. Another was sent to Buffalo. Over fifty men were required just for the passenger business alone.

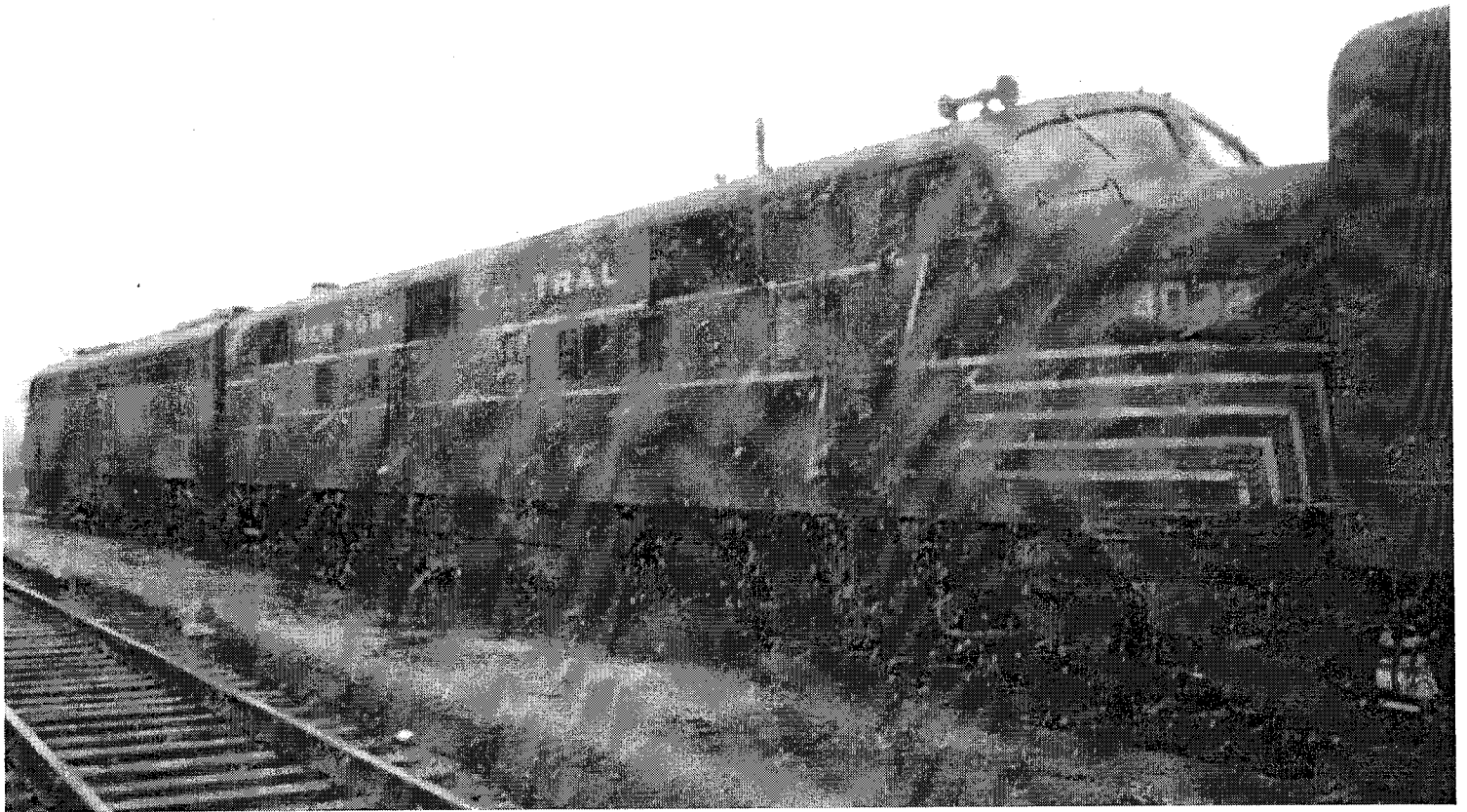
July 21st, 1947 owing to another derailment on the New York Central mainline at Porter Indiana the famous Twentieth Century Limited and another fast NYC passenger flyer were operated over the Canada Division, late Sunday night and early Monday.

Despite the fact that new Diesels were reported arriving, the local officials were considering in October 1947 a brand new cinder conveyor at the St Thomas engine terminal to handle the cinders from the serviced steam locomotives. The sleek new Diesels operated through St Thomas without the need for fuel or servicing.

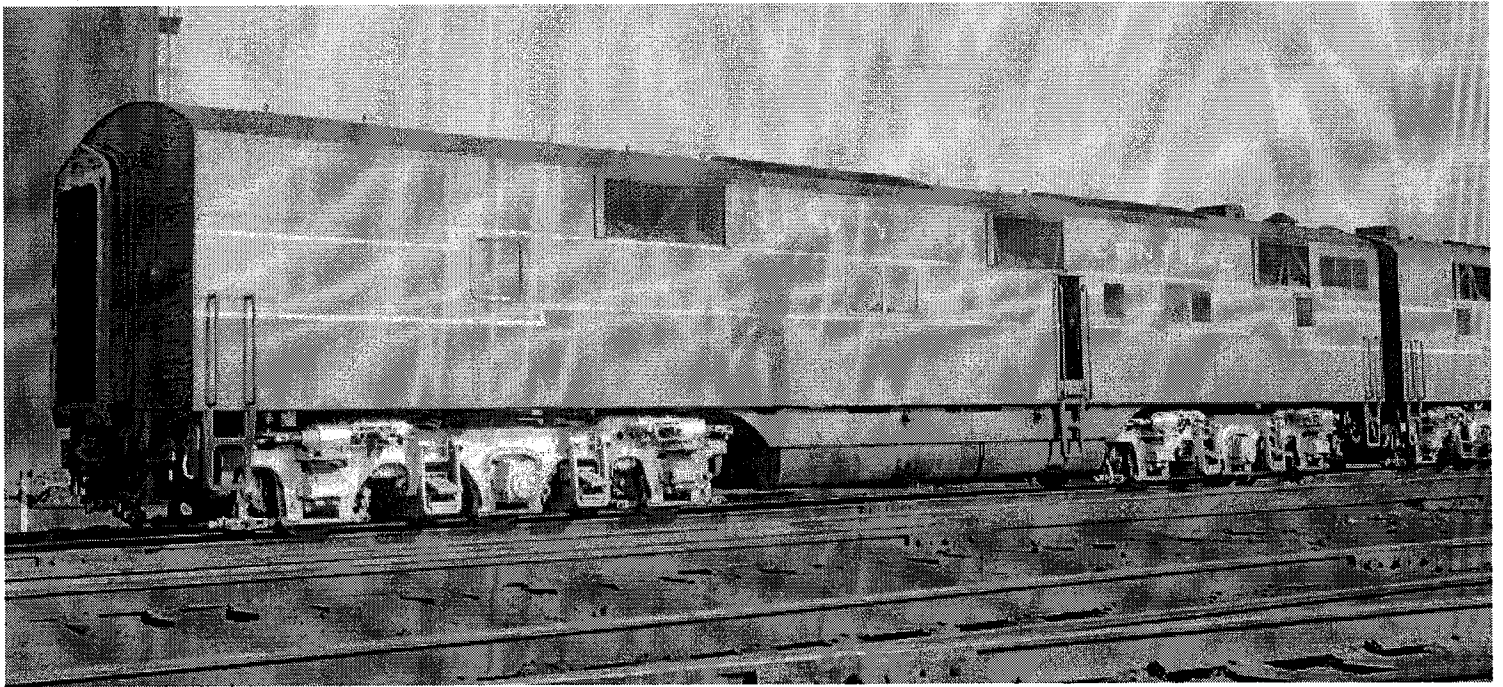
For some unexplained reason Diesel engines were absent from The North Shore Limited, and the Empire State Express trains on the Canada Division for two weeks at the end of October 1947. For these two weeks steam engines powered these trains until the Diesel returned.

November 1st a diesel freight locomotive on a westbound freight train on the Canada Division burned out near Dutton and had to be replaced by another engine before being able to continue to Windsor. Although only one of the units was effected, the other unit was not powerful enough to haul the long train and a steam engine was required to doublehead with the Diesel to Windsor.

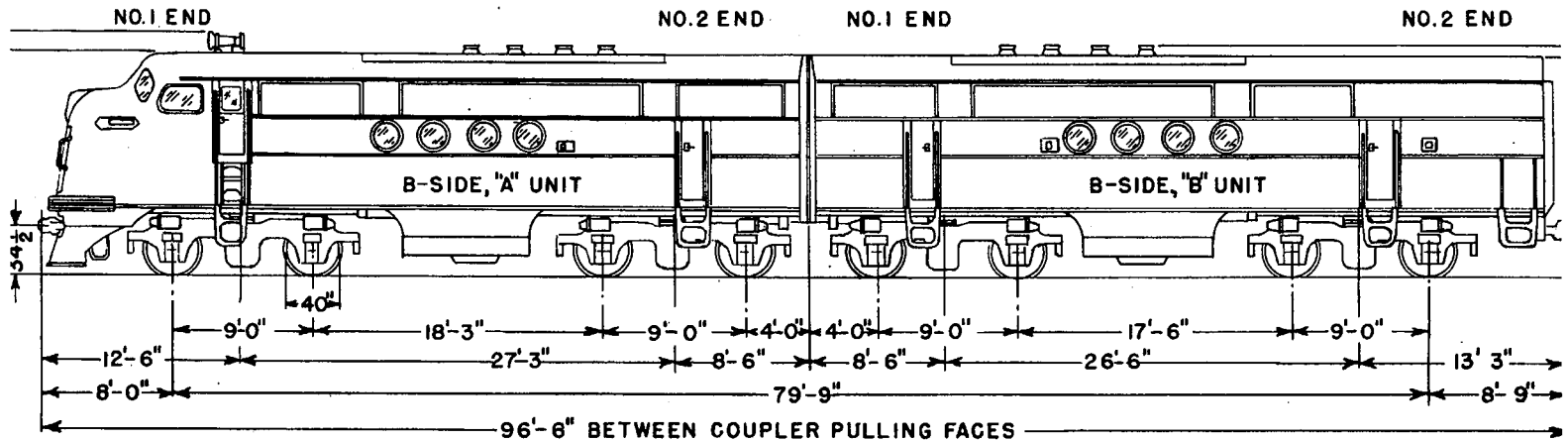








LOCOMOTIVE DESIGN  
250' RADIUS CU



ENGINES... TWO GENERAL MOTORS, TWO CYCLE, SOLID INJECTION, WATER COOLED  
 ENGINES (TOTAL FOR TWO UNITS) 2920 (2700 FOR TRACTION)  
 OF CYLINDERS PER ENGINE 16 - V TYPE  
 D STROKE 8 1/2 X 10  
 SPEED IDLING 275 R.P.M. FULL LOAD 800 R.P.M.  
 GENERATORS TWO EMD TYPE D-8, DIRECT DRIVEN  
 OF GENERATORS MAXIMUM 950 V., FULL LOAD 925 V.  
 Y OF GENERATORS 950 K.W. EACH, 1900 K.W. TOTAL  
 Y OF FUEL TANKS 1200 GALS. EACH, 2400 GALS. TOTAL  
 CAPACITY IN DISTANCE APPROX. 600 MILES  
 AND TYPE OF TRACTION MOTORS EIGHT EMD TYPE D-7-K1, 600 V.  
 TION 62/15 (4.133)  
 L - TYPE AND VOLTAGE ELECTRO-MOTIVE (M.U.) 64 V.  
 CIRCUIT BREAKER NONE  
 SPEED 65 M.P.H.  
 OF RUNNING SPEEDS 8  
 KE SCHEDULE NO. 8 EL SINGLE END WITH KS-8-PB BRAKE VALVE  
 BRAKES YES  
 CONTROL G.R.S. AUTO-MANUAL, SCHEDULE 2  
 PE AIR COMPRESSORS TWO GARD.DENV. TYPE WXE-8011 "V" MECH.DRIVEN  
 IAL YES

CONTINUOUS RATING - TRACTIVE EFFORT 65,  
 SPEED 11.5  
 HORSEPOWER 115  
 VENTILATION 115  
 MAXIMUM TRACTIVE EFFORT (AT 25% ADHESION) 115

RATING 115.5%

CLASS DFA-1A, DF

## HAGERSVILLE

APRIL 2. 1947

Train No. 44, The New York Special had a narrow escape from a very serious derailment at Hagersville Wednesday evening near eight o'clock, April 2nd 1947. The big 5300 class Hudson eastbound was travelling at sixty miles per hour.

The NYC at this time ran a local St Thomas to Hagersville freight to switch quarries and other industries. The freight engine was backing out of the airport siding on to the mainline from a sidetrack after switching a string of cars into siding leading to the Air Station. The switch engine went too far and went through a derail, making it too close to the mainline.

The fast Hudson was sideswiped by the freight engine's tender. The switch engine was forced sideways and tumbled into the ditch, The Hudson had one cylinder and the running gear ripped off as it careened sideways. The freight engine tender had partly fowled the main track and scrapped the sides of the following passenger cars. The windows were shattered and pieces of glass were showered on the passengers. Out of this collision surprisingly not a person was injured. No one required hospital attention. A replacement engine was sent from St Thomas along with the derrick. The train proceeded on to Buffalo after a three hour delay. The wreck of the freight engine laid in the ditch so the main line was not affected and train movements continued as normal. Both NYC and the Pere Marquette derricks were required to pull the freight locomotive from the ditch the next day.

## GIVE THEM HELL HARRY!

A combined force Mounties, F.B.I. and railway police threw a cordon around the TH&B Hamilton station in the early morning of June 13th, 1947. No unauthorized persons were allowed on the upper level platforms. A special twelve car train stopped in Hamilton for a change of crews.

The Hamilton Spectator reported that the tight security was best illustrated in a statement of a depot employee. " I was so close to Truman that I could have reached him with a 100 foot pole."

Some Mounties stood in the uniforms but it was quickly observed that other security men bustled with brief cases while others took the role of railway workmen.

The president's armoured-plated car Ferdinand Magellan was on the end of the train. It looked like a very ordinary Pullman car from the side but the Presidential Seal adorned the rear observation platform.

The train was taken over by a local TH&B crew; Engineer Edgar Dean, Fireman Peter McDade and other members of the crew were Robert Irvine, Thomas Kelly and William Hastings.

The platform party included TH&B President T. H. Malcolson, Superintendent W. J. Warwick, and other TH&B and NYC officials. The train only stopped for five minutes in Hamilton. The train then left for Welland then to Niagara Falls, where it stopped so that Harry Truman could do a little sightseeing then the train crossed the river onward to Buffalo.

Engineer Dean later stated that the heavy armoured Presidential Car was so heavy that with it on the back end instead of a twelve car train it handled like a sixteen car train.

December 8 1947 a train wreck on the NYC mainline between Buffalo and Cleveland once again routed New York central trains onto the Canada Division. Six sleek streamlined passenger trains which normally travel over the south shore route were detoured through Canada. Included in the list of limited's were: The Twentieth Century Limited, The Commodore Vanderbilt and The Pacemaker. These trains were powered by three unit diesels The local surprise was that a total of twelve engine crews and six train crews were employed to handle all the extra trains.

As the diesels arrived, steam locomotion was still important. On April 1st 1948 it was reported that an extra long express train went out of St Thomas at 7:30 in the morning west bound to Windsor hauled by engine 5370. There were seventy express cars on the train. The coal strike in the United States continued and coal supplies for the operation of steam engines was being rationed and many trains and services were being cut.

June 17, 1948, a queer combination of locomotives was reported that on the Saturday morning on the Canada Division two Diesel-electric locomotives were combined with a steam engine to haul fast freight train M.C.\_1 out of St Thomas to Windsor. The Diesels were engines 1623 and 1622 both General Motors FT's leading, and large passenger Hudson 5276.

Diesel units 1029 and 1030 hauled MC-1 westbound on the Canada Division December 29th 1948 westbound. Although not new Diesels it was their first trip through Canada, and despite a strong head wind the important fast freight train made good time with the expert crew. The units are reversible and can be operated in either direction without being turned.



## THE NIAGARA BRANCH

The New York Central decided in 1947 to abandon its branch line from Stamford (Niagara Falls) to Niagara-on-the-Lake nine miles and applied in 1947, for its abandonment with the Board of Transport. The application for abandonment of the 9.8 miles of track from a point 3.16 miles north-west of Stamford to the wharf at Niagara-on-the-Lake. There had had not been scheduled trains over the branch since the early 1930's. It had seen service during the Second War to take troop trains into Camp Niagara. The railway had been built in 1854 as the Erie and Ontario Railway. The section of three miles serviced a quarry, and those tracks were torn up in 1962.

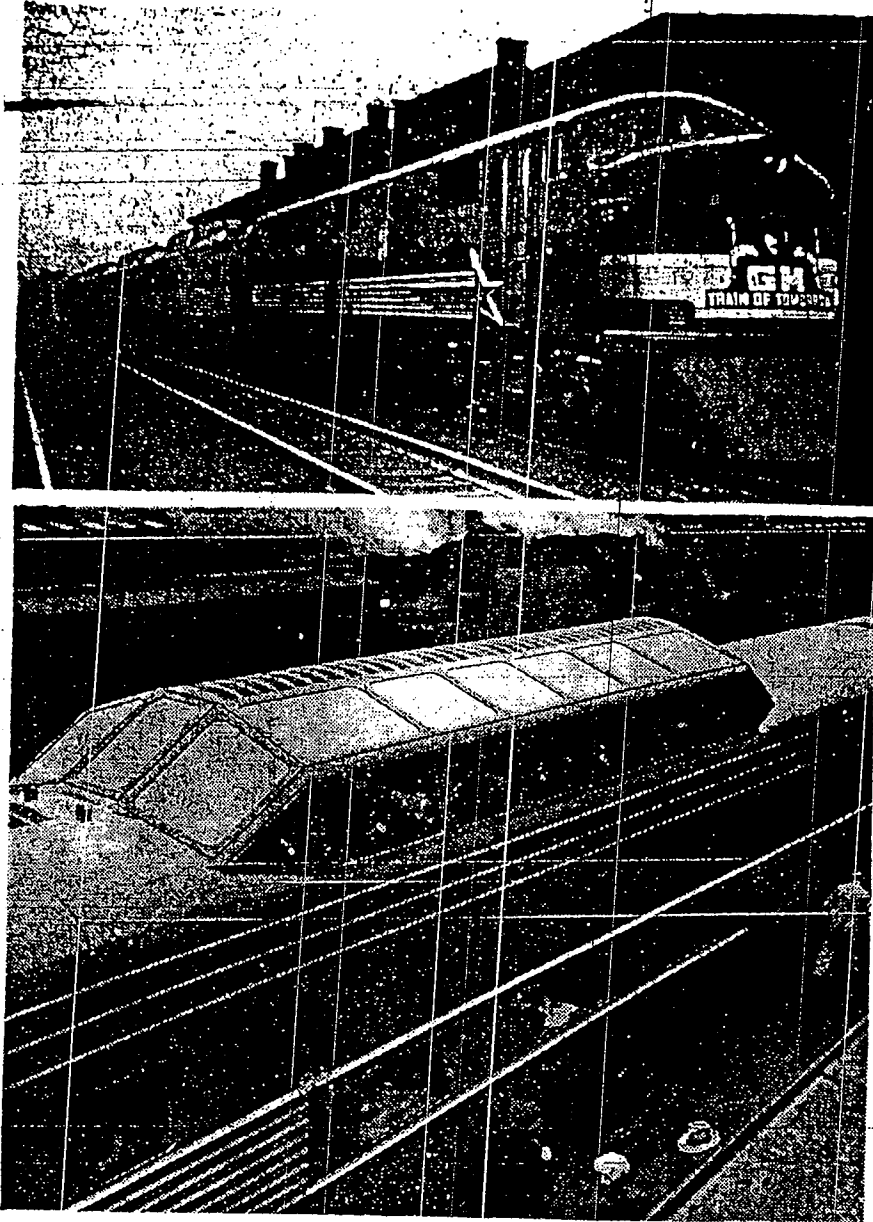
## TRAIN OF TOMORROW

The General Motors Diesel powered Train of Tomorrow mad a quick trip over the Canada Division from Buffalo to Welland on Monday September 1st, 1947, where it turned on to the Toronto Hamilton and Buffalo through Hamilton and over the CNR to Toronto where it went on display at the Canadian National Exhibition.

The Train of Tomorrow made a second appearance on the Canada Division January 17th 1949. The Wabash Railroad brought the General Motors train from a tour of the American mid-west into Detroit on Sunday, January 16th. The blue streamliner was turned over to the Michigan Central and it left Detroit that Monday morning going through the tunnel to Windsor and then on over the Canada Division through St Thomas, Welland to Fort Erie and Buffalo. There were no scheduled stop made in Canada, and the train was handled in bond from Detroit to Buffalo. The train did have on board eighty-five rail official, industrialists and newspaper men all from Detroit.

ST. THOMAS, ONTARIO, TUESDAY, JANUARY 18, 1949

## Train of Tomorrow's Brief Stop Here



—Photos by Stollery.

THE GM's Train of Tomorrow is seen in the top picture as it pulled into the New York Central Station, St. Thomas, on Monday morning after making an 22-minute run from Windsor to St. Thomas, a distance of 110 miles. The four-car horizon-blue trimmed luxury flyer was greeted by hundreds of interested spectators in St. Thomas, including many school children who lined the Centre street boulevard. The diesel engine and four cars comprised a complete unit of the train which has already toured some 50,000 miles.

In the lower picture is a view of the equipment revealing the Astra Domes on top of the cars, the regular seats in between and the lower compartments on eye level with people on the platform. The unique features of the future traveling limited were only seen from the outside, the special being moved "in, bond" between Detroit and Black Rock, N.Y. No one was permitted to get on the train here.



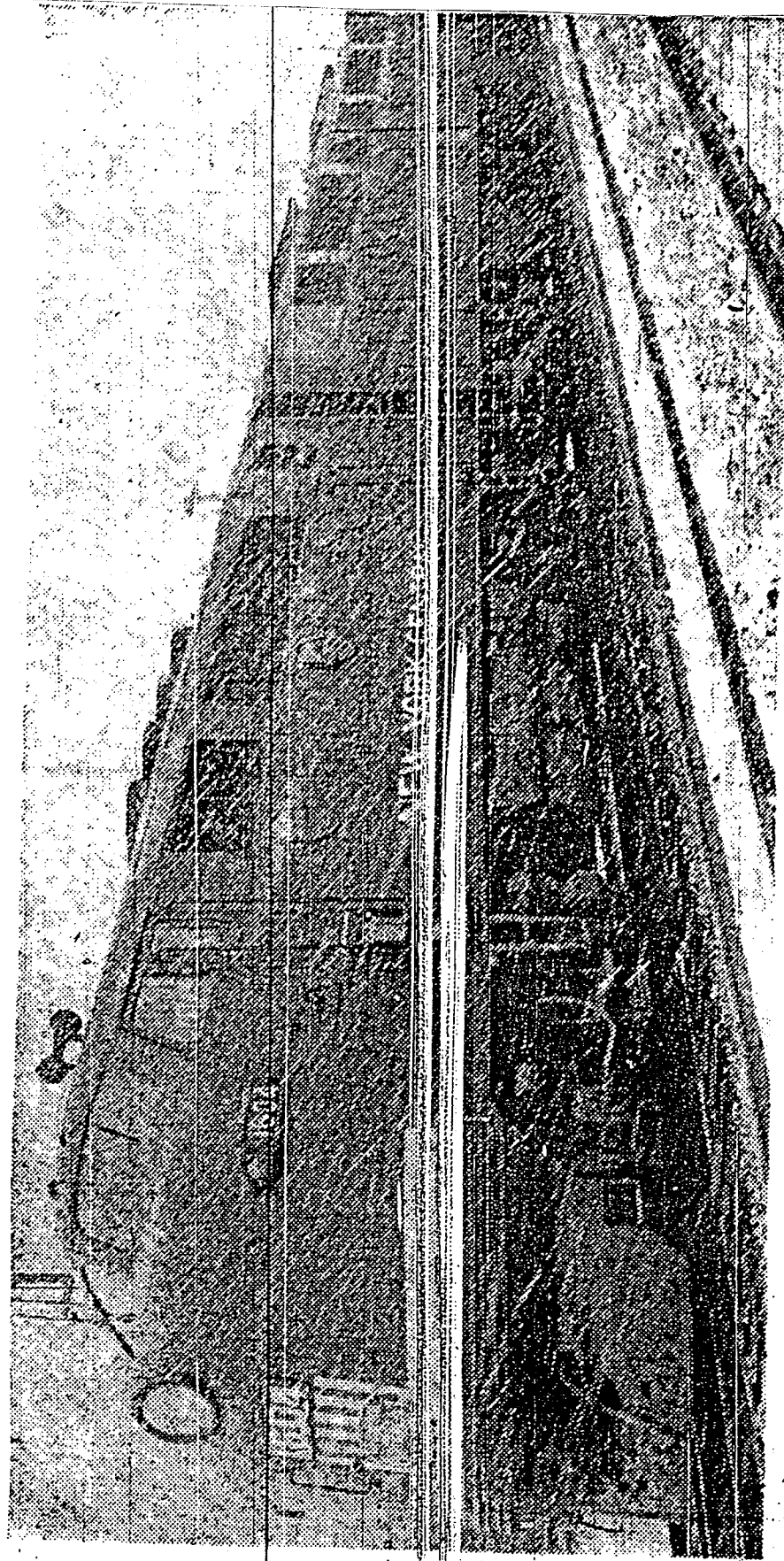
## ST CLAIR BRANCH

Freight traffic on the branch lines of the Canada Division in July 1947 continued just as heavy, if not heavier, than during the Second World War. In addition to the double track mainline, the MCR operated a number of branch lines and one of the busiest of those was the St Clair Branch between St Thomas and Courtright and the Petrolea region. Some 20 to 30 cars are taken in and out daily and it was reported that the oil shipments out of Petrolea area were heavier in 1947 than during the peak War years. Livestock shipments were heavy too, about 15 to 20 cars on busy days. Although only one mixed train is operated daily up and back and the branch was operated under a manual block system. The engines that held down the mixed train were the unique 4-6-0's 880 and 885, built in the St Thomas Shops at the turn of the century.

ATTERCLIFFE

AUGUST 4, 1947

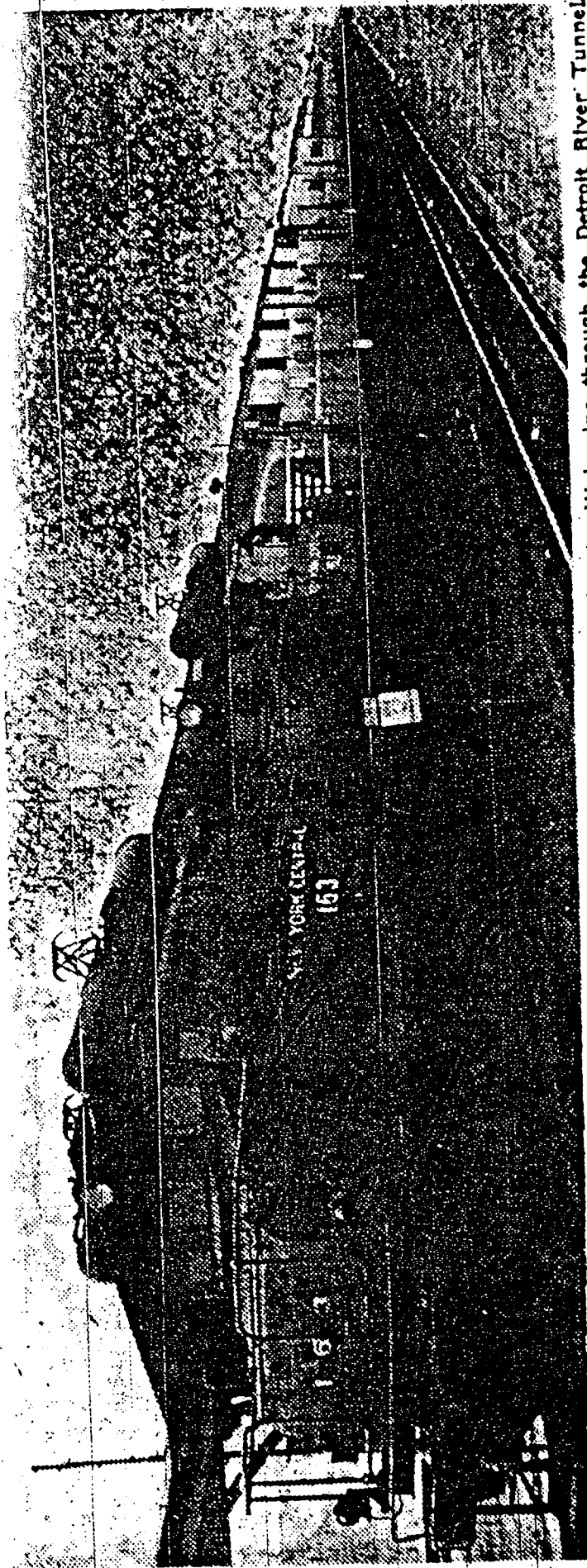
The Wolverine westbound had a narrow escape from a serious derailment just west of Welland on Sunday August the fourth 1947. Diesels 4012 and 4013, big E-7's, had Engineer Spencer and Fireman Westaway in the locomotive cab. Conductor Poulson had charge of the train. An axle broke on one of the passenger cars and the end of the car settled down onto the track. Fortunately a serious derailment was avoided. In short time the mess was cleaned up and the train was on its way. Later a report from Detroit told an even more interesting tale; that an alert Pullman porter Walter Jones realized immediately that an axle had snapped on one of the coaches of the Wolverine which was hitting 60 miles per hour and Mr Jones jerked the emergency signal which stopped the train before the cars could pile up, thereby saving 400 passengers from death or injury. When the train reached New York, Raja Faris Howrani a wealthy merchant from India, suggested a collection and a vote of thanks, the Detroit continued, the result being the that a petition was signed by 39 people who paid a total of \$32.00. "Apparently some of them did not think their lives worth more than 30 cents." the Detroit report concluded.



This picture of a three-unit diesel locomotive, pulling an N.Y.C. freight train, was taken at the St. Thomas depot last fall, during the season's first snowfall. These diesels are used in both passenger and

freight service and smaller ones in switching service. The N.Y.C. recently placed an order for 94 new locomotives of the diesel type

—Photos by Stollery.



Two powerful electric engines are coupled on the diesel units at Windsor, to take the Wolverine through the Detroit River Tunnel. Steam locomotives and diesels cannot be operated in the tunnel because of the fumes.



westbound Wolverine passes the eastbound North Shore Limited, just west of Fletcher. Dawn just breaking as the trains rushed past each other at 80 miles an hour. The headlight on the North Shore Limited was still burning. Photos by Stollery.

## CNR-WABASH ST THOMAS SHOPS

The influx of Diesels running through Canada reduced the requirement for the servicing of locomotives at St Thomas shops. During the 1940's the Wabash Railway had reached an agreement with the New York Central for the repair and maintenance of the locomotives used in Canada. In 1947 the Canadian National Railways had a surge of traffic and did not have enough motive power to handle the increase in freight. The CNR had not started a program of dieselization. While American railroads had invested in diesel road freight engines starting in 1940 with the introduction of the EMD FT, at the beginning of 1948 there was not one road diesel on Canadian railroads. The Canadian National "loaned" steam locomotives from the Wabash, the Delaware and Hudson, the Erie Railroad, the Lackawanna and the Lehigh Valley in the post-war period. The CNR Stratford shops were working at full capacity, and St Thomas shops were not. December 19th, 1947, Thomas C. Cottrell, CNR Divisional Master-Mechanic announced that starting January 1, 1948 one CNR steam locomotive per month would be re-serviced, overhauled and rebuilt at the NYC St Thomas. The CNR needed the motive power and the St Thomas shops would continue work without layoffs servicing Wabash and Canadian National steam locomotives.

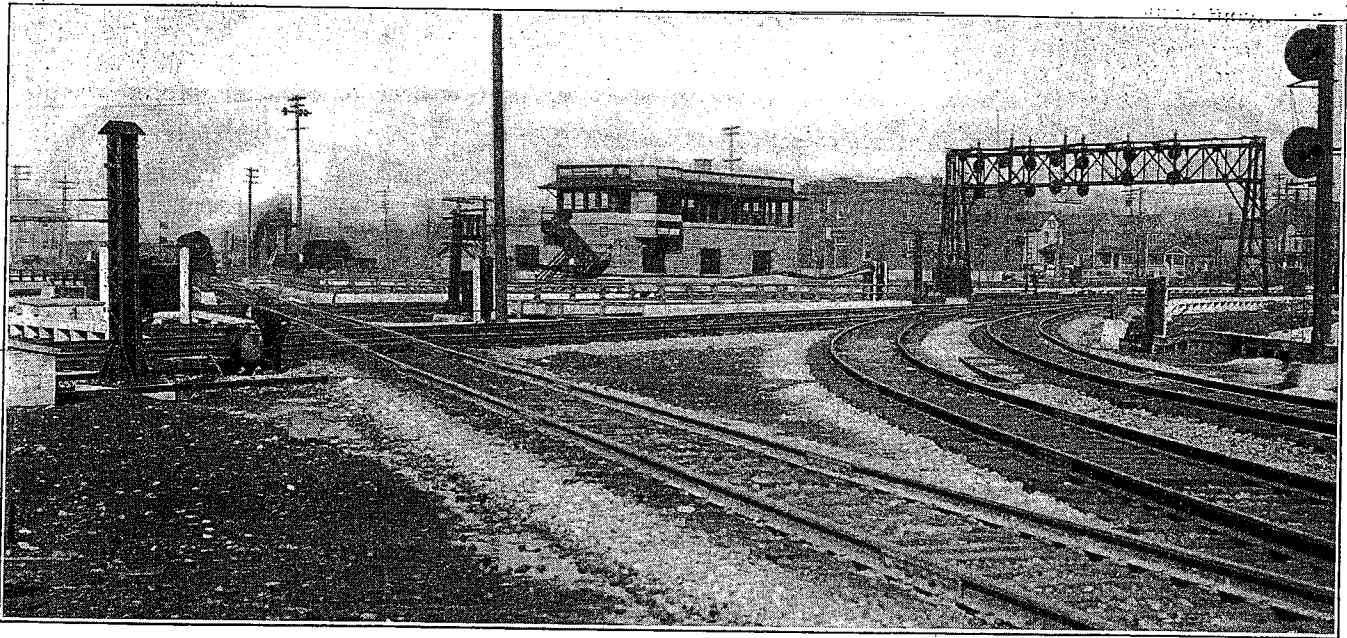
## THE END OF STEAM LOCOMOTION

The end of the steam locomotion on the Canada Division of the New York Central occurred in April of 1957. On April 10th, the first three units of an order of twelve GP-9 general purpose diesel road locomotives arrived from the General Motors Diesel Limited London Plant. A ceremony was held that day at the large St Thomas station. GMD official W. M. Warner presented a diesel controller handle to NYC Divisional Superintendent W. F. Davis at this event to symbolize the event. Railway officials from New York, Detroit and St Thomas were on hand to watch the ceremony.

April 29th saw the completion of the order from GMD. The new locomotives were for use on the Canada Division wholly, for the through freight and passenger trains were powered by diesels assigned at the large Central terminals of Chicago, New York, DeWitt (Albany) and Collingwood (Cleveland). There were now a fleet of 22 diesel locomotives assigned to the Canada Division.

The New York Central disappeared February 1st, 1968 when it merged with rival Pennsylvania Railroad and the brand new company was known as the Penn Central Transportation Company.

Penn Central was only more than one week old when tragedy struck February 8th, 1968 at Niagara Falls. A collision occurred that Saturday afternoon near the McLeod Road and Stanley Avenue crossing. Both trains were on the southbound track. A diesel yard engine was backing south into Montrose Yard, with three cars and a caboose at what was termed yard speed of eight miles per hour. On the same track was a three diesel unit, 160 car through freight from St Thomas bound for Niagara Falls, New York. In the cab of the freight was Engineer Albert Bolby, fireman Maxwell Carlton Mills, and brakeman Jake Bowman. Engineer saw the red signal and the yard freight backing toward his train. He yelled to his fireman to jump, then he leapt from the engine. The rear end crew riding the caboose saw the approaching train and Conductor Herbert Tripp and brakeman Steven Sicotte jumped from the caboose seconds before the impact. fireman Mills was killed in the collision.



*Looking Northeast Directly Over the Main Street Bridges and the Complicated Track Layout in This Locality*

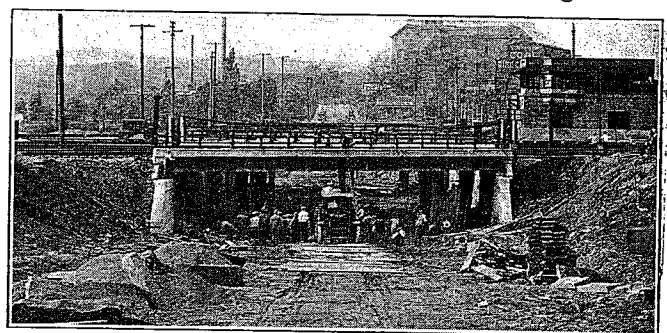
# N. Y. C. Eliminates Grade Crossings Under Heavy Traffic

*Undercutting network of 13 tracks carrying 220 train movements daily presented unusual construction problems*

**W**HILE many important highway grade crossing elimination projects have been undertaken by the railroads throughout the country of late, it is doubtful if a more complicated and interesting project has been completed during the past year than the elimination of the grade crossings of the network of tracks just east of the east end of the Michigan Central and International bridges at Suspension Bridge, New York. This project, which cost in the neighborhood of \$1,500,000, and involved the rearrangement of the track layout and the undercutting of 13 tracks under an average daily movement of 220 trains, was undertaken by the New York Central in May, 1925, and has recently been completed with a record of not having seriously interfered with traffic at any time during the work. This record is of special significance when it is appreciated that the track changes at this point included the installing of 11 double slip and 1 single slip switches, and that excavating for the under-crossings necessitated the general raising of the tracks about 21 in., the removal of about 70,000 cu. yd. of earth, and the driving of 14,648 lin. ft. of false-work piling.

Other important work involved the placing of 926 tons of steel and 4,000 cu. yd. of concrete in connection with three bridges and retaining walls, the installation of approximately 1,885 lin. ft. of sewers, and the laying of about 9,700 sq. yd. of brick and concrete paving in addition to 28,000 sq. ft. of sidewalks. A most important auxiliary to the work at Suspension Bridge, complicating the heavy movement of trains, and yet one which was handled in a most effective manner, was the complete remodeling and the extension of the interlocking and signal systems in this vicinity.

The primary purpose of the work at Suspension Bridge was to eliminate the crossing of 10 tracks over Main street at grade which, owing to its heavy travel and the large number of train movements, was particularly dangerous, requiring the employment of crossing watchmen at five points for periods of from 16 hours to the entire day. In connection with this work, however, it was also planned to eliminate the three-track grade crossing in Depot avenue which is the main thoroughfare to



*Preparing the Pavement Sub-Grade on the South Approach to the Main Street Bridges*

the passenger station at Suspension Bridge. The heavy traffic in Main street, which averages several thousand vehicles a day, is due for the most part to the fact that this street is one of the most highly traveled thoroughfares to Niagara Falls from Buffalo and the south, and also, that it is on the main route of a large number of funeral parties to and from a cemetery some distance north of the crossings. While the most serious delays



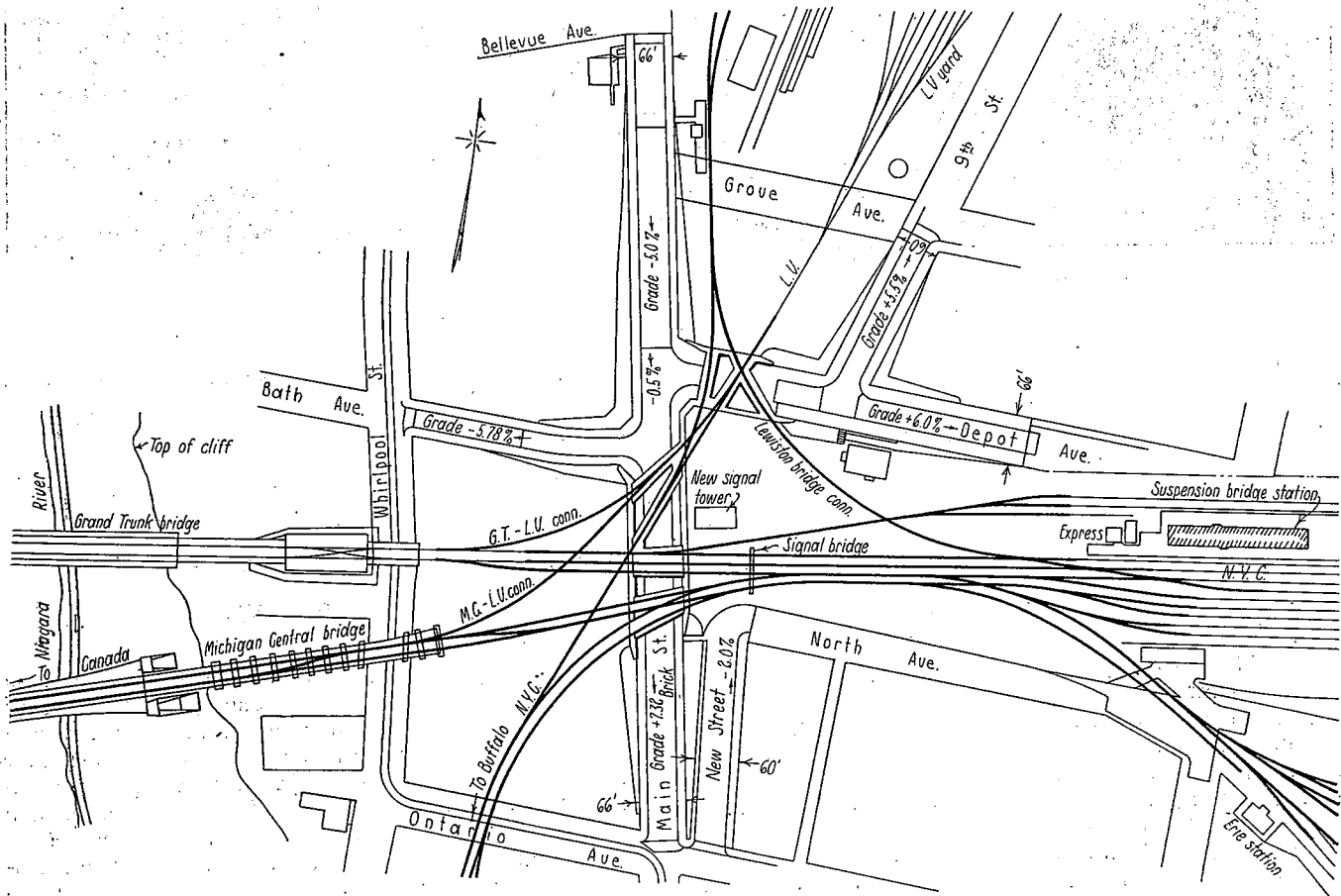
and inconveniences at these crossings were encountered by the street traffic, still it was not infrequent that trains were delayed, which seriously affected the already congested movements in this territory.

### Network of Tracks Complicates Project

The tracks crossing Main street, which lies at right angles to and approximately 650 ft. east of the east ends of the Michigan Central and Canadian National bridges, include the two bridge tracks of the Michigan Central, the two bridge tracks and an additional lead of the Canadian National, the two tracks of the New York Central's Niagara branch, and connections from the tracks

on all three of these tracks, two of which are connections to the Lewiston branch of the New York Central and the other, the yard lead of the Lehigh Valley. The only other grading in connection with this project was incident to the laying out of a new street about 300 ft. long, adjacent to and practically parallel with Main street, to form a west end outlet to North avenue which, owing to the new arrangement, could not be made to intersect Main street because of the necessity of constructing an overhead bridge at this point.

The grading consisted of approximately 70,000 cu. yd. of clay and gumbo, no rock being encountered. All of this material, in the open, was removed by means of



The Track Layout Is Complicated

of each of these roads to the Lehigh Valley's property lying northeast of the crossings. Complicating the situation at this point is the widely varying angles at which these tracks cross Main street and the fact that through this territory there are a large number of switching and turning movements daily, not alone by the roads mentioned but also by trains of the Pere Marquette and the Erie.

In eliminating the grade crossings over Main street, it was necessary to detour all highway traffic to Whirlpool street which passes under the Michigan Central and Canadian National tracks, and to make a cut in Main street for a distance of about 1,100 ft., 22 ft. deep at the lowest point. This in turn necessitated the cutting down of the intersecting streets, Bath avenue and Depot avenue, for 300 ft. and 475 ft. respectively, and also the grading of 250 ft. in 9th street which intersects Depot avenue. The lowering of Depot avenue made necessary the elimination of the three-track grade crossing over this avenue near its intersection with Main street which, however, was highly desirable owing to the heavy movements

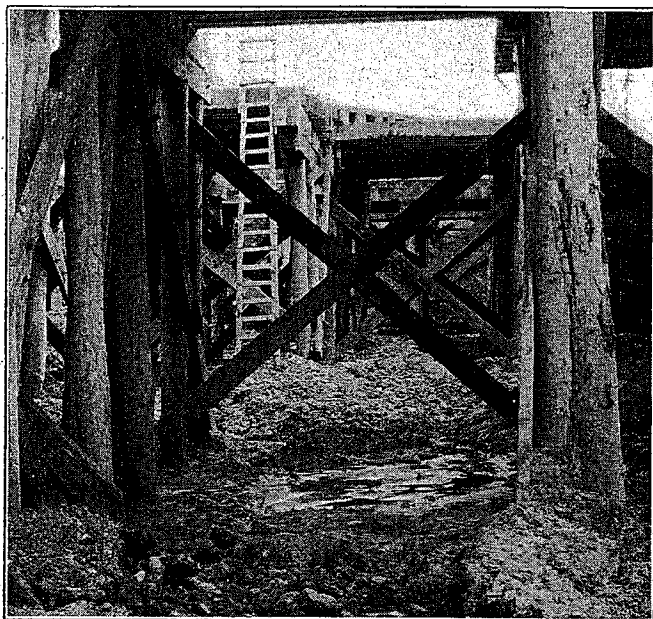
crawler tread cranes equipped with drag line buckets, which loaded direct into the motor trucks that were used to carry it away. The most difficult part of the grading was the removing of the earth from beneath the falsework supporting the network of tracks, and from between the various intersecting falsework trestles which in most cases did not provide room enough for the operation of the drag line bucket or the motor trucks. In accomplishing this work it was necessary, therefore, to remove all of the dirt from between trestles with clam shell buckets, and that beneath the trestles by means of picks and shovels. This, to a large extent, necessitated several handlings of the material, particularly that from beneath the trestles, which was first thrown out into the open and then removed by a clam shell bucket to a point where it was within the reach of the drag line.

### Undercutting Required Extensive Falsework

Second only to the difficulty encountered in this part of the grading was the raising and rearrangement of the tracks over Main street and the driving of 14,648 lin-

ft. of piling for the falsework, all of which was done under traffic. The principal track changes in connection with the elimination of the grade crossings of Main Street were the moving northward and shortening of the New York Central's Niagara branch line connection with the bridge lead tracks of the Michigan Central, the removing of the Erie's track connection out of North avenue to a point some 650 ft. east, and the relocation of the New York Central's Lewiston branch connection from the station tracks. These changes were made not alone to improve operating conditions at this point, but also to preclude the construction of an additional bridge in the case of the Niagara branch connection, and the construction of the more complicated bridges which would have been caused by the old layout of the other two tracks. In order to facilitate the construction of the bridges built, however, these changes were not made until the bridges were completed. In this manner, the minimum of piling was driven on the sites of the new bridges, and much of their construction was done, therefore, without the interference of piling or traffic.

Owing to the frequent train movements over all of the tracks involved in the work, which made it impractical to employ a locomotive pile driver or a pile driver car with a work train, it is interesting to note the use made of a locomotive crane equipped with pile driver leads and operating on its own sectional track. With this equipment, which could be moved about between the railroad tracks at will, all of the piles were driven without inter-

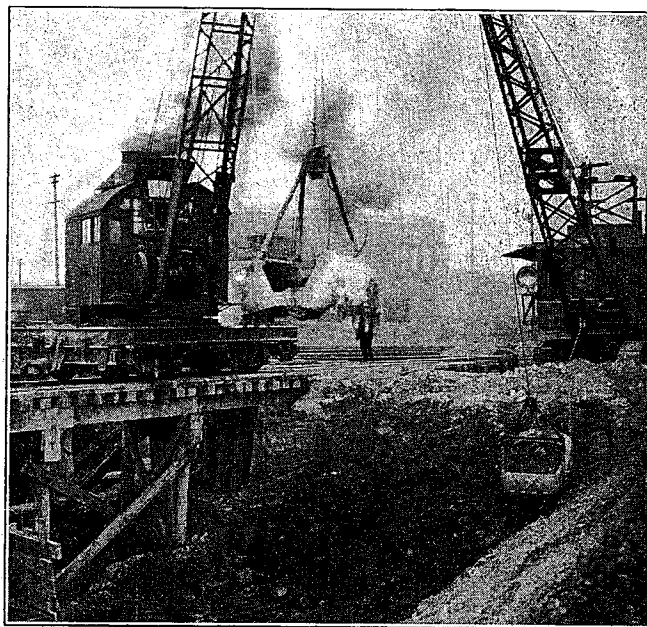


Undercutting the Tracks Necessitated the Driving of 14,648 Lin. Ft. of Falsework Piling

fering with traffic other than the occasional rerouting of a train. In all, a total of 95 bents were driven which contained from 4 to 27 piles each, depending upon the width to which it was necessary to carry the supporting structure. The practice followed for the most part was that of spotting the crane between the various tracks so that when traffic prevented the driving of piles in one section of the falsework, it could readily shift its position slightly and proceed to drive the piling in the bents of another section of the falsework. In this manner, minimum delay was caused in the driving of the piles, which under other circumstances would have seriously retarded the work and unavoidably interfered with traffic.

In order to facilitate the excavation work, the installa-

tion of sewers and the construction of bridge abutments and column piers, all of the pile bents were driven parallel with the center line of the street, the spacing between them ranging from 9 ft. 8 in. to 13 ft. 3 in., depending upon the nature of the layout and the location of the bridge abutments, piers and sewers, with which they could not be allowed to interfere. All of the piling, capping, stringers and bracing used in the construction of the falsework was long leaf yellow pine, and all connections were made with  $\frac{3}{4}$ -in. bolts and ogee washers,



A Clam Shell Excavating in Cramped Quarters and Placing the Material Within Reach of a Drag Line Bucket

drop bolts being used to connect the stringers to the caps and the caps to the piles so that these members could be removed in the minimum of time when the steel was to be erected.

#### Track Layout Necessitates

##### Irregularly Shaped Bridges

The bridges necessitated by the elimination of the grade crossings are three in number, two of which are very irregular in plan, being in reality three distinct bridges in each case, the floor structures of which are connected together to provide for the intersection of tracks. These bridges are the one over Depot avenue and the northerly bridge over Main street, each of which provides for track crossings of the street at three widely varying angles. In spite of the varying shapes of the three bridges, all are of the same general type of construction, having heavy I-beam floor stringers and deep built-up cross girders at the curb lines, and also at the center line of the street in the case of the Main street bridges, which rest on shop fabricated steel columns. The ends of the bridges are in all cases supported on gravity type concrete abutments which, together with the several short stretches of retaining walls, involved the placing of approximately 4,000 cu. yd. of concrete.

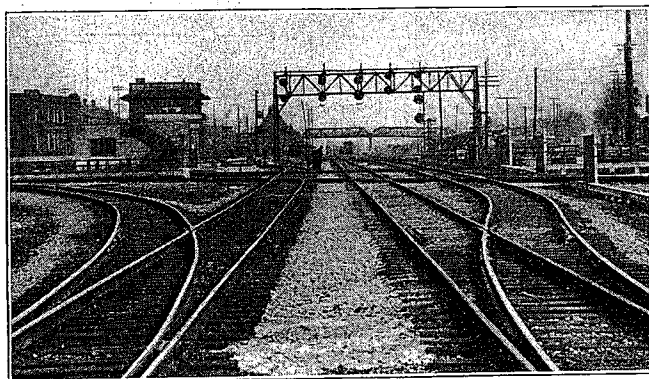
The particular advantages of this type of construction as used in these bridges are that it lent itself readily to the very irregular floor design necessary to meet the conditions presented, and also that it afforded a minimum depth of floor structure, which permitted a minimum amount of excavation to secure the 13-ft. clearance desired above the street pavements.

With 66 ft. between the faces of the bridge abutments

in Main street, this arrangement provides 19½-ft. roadways separated by a center row of columns, and clear walkways 9½ ft. wide on each side of the street between the abutments and the columns at the curb lines. In Depot avenue the distance between abutments is likewise 66 ft., but owing to the fact that traffic is lighter there than on Main street, the center columns have been omitted and a single clear roadway 30 ft. wide is provided with 15½-ft. walkways on each side.

#### Deck Structures Similar

The deck structures of all of the bridges are likewise similar in construction, being built up of 7/16-in. steel deck plates over the tops of the floor stringers, above which is a 6-in. course of concrete, waterproofed, and then a sand cushion and a 2¼-in. course of hard burned brick, the bricks extending only directly under the tracks to provide protection to the waterproofing against the cutting action of the rock ballast. The decks in all cases are adequately drained by the slight pitches provided in the concrete course which direct the water to outlets. These in turn convey the water to the gutters and down spouts, the latter being located close to the supporting



Completed Tracks Looking West Towards Suspension Bridge Station. Showing Canadian Grand Trunk Tracks with Connection on Right. (These Also Are Crossing Over the Main Street Bridge)

columns and provided with a hand hold and trap for cleaning.

Aside from the structural advantages contained in the bridges, it is evident that an attempt has been made to enhance their appearance, this having been accomplished through the extension of the concrete floor slab up over the top of the outside girders, terminating in an ornamental concrete fascia along the top which is surmounted by a double pipe railing supported by attractive cast iron posts. Other evidences of this appear in the rounded ends of the cross girders and the gracefully curved brackets between these girders and the bridge columns.

#### Auxiliary Work Is Also a Large Item

The auxiliary work in connection with this project involved the removal of the old sewers in the streets lowered and the laying of a total of approximately 1,885 ft. of new 10-in., 12-in., 15-in., 18-in. and 24-in. sewers, the greater portion of which were installed in advance of the completion of the grading work so as to provide for ample drainage of the new area excavated. It also included the laying of 6,700 sq. yd. of brick pavement in Main street, the placing of 3,000 sq. yd. of concrete paving in Depot avenue and Ninth street, the installation of 45,000 lin. ft. of concrete curbing, and the laying of about 28,000 sq. ft. of concrete sidewalks.

The new signal and interlocking systems installed at

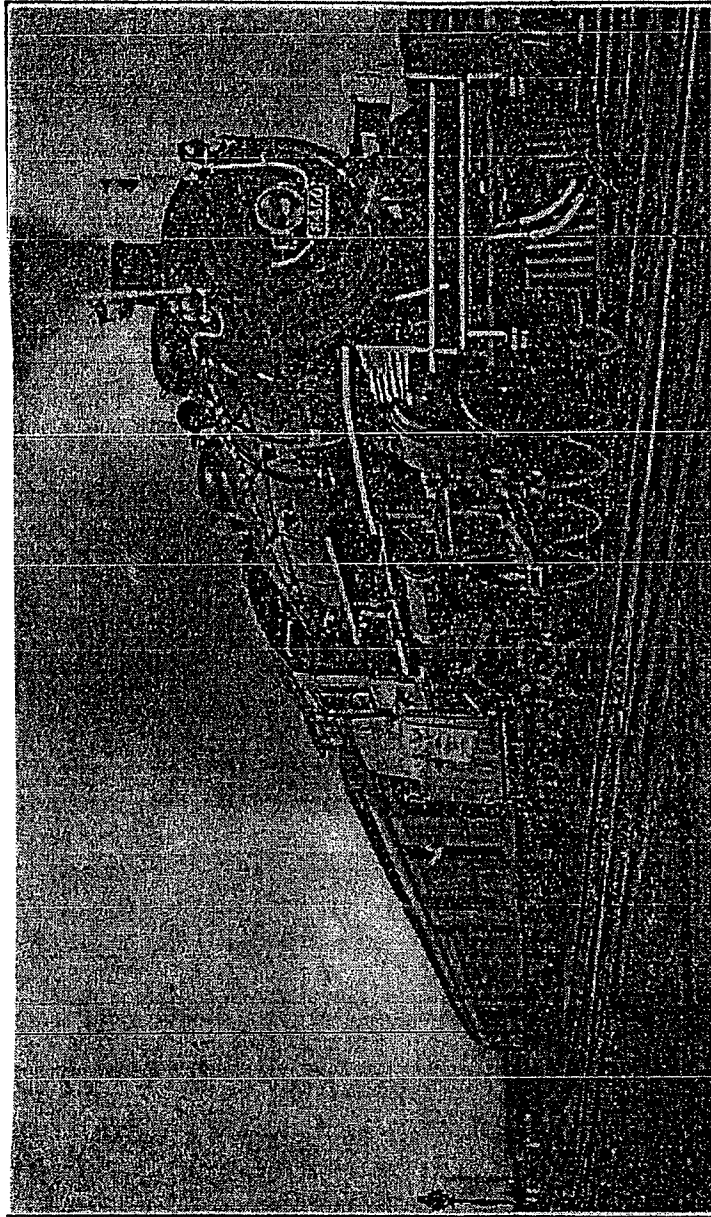
Suspension Bridge, include 52 three-position signals of the searchlight color light type, 57 electric switch machines, and an electric interlocking plant of 130 working levers which is housed in a new brick and concrete signal tower located just east of the most northerly bridge built over Main street. From this tower control is had over all train movements within the immediate vicinity of Suspension Bridge, and also for about two miles south on the Niagara branch and about one mile north on the Lewiston branch. The new installation replaces one of the low pressure pneumatic type with semaphore signals, which was installed in 1900 when the New York Central was getting ready to handle the Pan American Exposition business.

One of the most interesting features in connection with the signal work was the change-over from the old pneumatic system to the new electric system, which had to be effected with the least possible interference to traffic, and at the same time insure the safety of every movement. This work was not undertaken until both bridges over Main street were completed and the track changes made in connection with them, but with this work out of the way, all of the pneumatically operated switches were converted into hand operated switches through ground-throw switch stands. By carefully planning and considerable preliminary work, this change was made, complete, in about two and one-half hours, all of the switch stands having been installed in advance, ready to be connected up to the switch points as soon as the machine connecting rods were released. This change-over was made on June 8, 1926, from which date, until September 17, the necessary switchmen were employed, working under an assistant signal supervisor acting in the capacity of an assistant yardmaster. During this period the new installation was put in place, and on the latter date mentioned, the change-over from hand to electric operation was effected, this being accomplished in about one-half hour. The new electric interlocking was manufactured and installed by the General Railway Signal Co., Rochester, N. Y.

#### Ladder Tracks Laid

The track work auxiliary to the grade crossing elimination was confined largely to the layout east of Main street where, in order to increase the flexibility of train movement in this highly congested territory, new ladder tracks and track connections were laid out which involved the installation of 11 double slip and 1 single slip switches. The interesting features of this work lie for the most part in the fact that all of these switches were assembled complete, tie plated and spiked to the ties, on sites near the points where they were to be installed, and then lifted bodily into place by a Brown hoist and a locomotive crane. By accomplishing this in this manner, all of these switches were installed in a minimum of time, with but little rerouting of traffic and with but a single train delay of approximately 2½ hours.

The work at Suspension Bridge, the cost of which was borne by the New York Central, the Erie, the city and the state, was done by the New York Central, under the general supervision of G. W. Kittredge, chief engineer, who retired on January 1; J. W. Pfau, engineer of construction; J. G. Brennan, engineer of grade crossings; W. C. Maurice, district engineer; and W. H. Elliott, signal engineer. The work in the field was in direct charge of L. S. Shupp, assistant engineer. All of the grading, bridge work, sewer changes and paving was done by the Walsh Construction Company, Davenport, Iowa, which company was represented on the ground by Earl Heber. The track raising and track changes were handled by railroad forces.



*L. Baker Photo, submitted by J. L. Ferguson, 25 Forest Ave., St. Thomas, Ontario, Canada*  
The Michigan Central's 8400 Pacific (Now 4840) Shown Roaring Through St. Thomas, Ont., Fifteen Years Ago, with a Trainload of BofLF&E Delegates, En Route to a Fireman's Convention at Detroit.

STREAMLINED  
NEW YORK CENTRAL  
HUDSONS  
IN  
CANADA

C. H. RIFF

# MORE N. Y. C. STREAMLINED ENGINES MAY COME LATER

No. 5429 May Be Followed by Others When War Is Over;  
Makes Fine Run on Nos. 17 and 50; Other Items

While there was no actual secrecy regarding the presence of engine No. 5429, huge streamlined monster of the New York Central System, on the Canada Division of the Michigan Central Railroad, Wednesday, there is considerable speculation as to the possible operation of these engines through St. Thomas on the international run between Harmon, N.Y., and Windsor. Early Wednesday morning, engine No. 5429 hauled the westbound Wolverine to Windsor, and it returned at noon on the second section of No. 50, the Empire State Express. It created much attention wherever it passed in daylight, but as no advance notice was given out publicly in St. Thomas, it passed through here at the noon hour with only a few being aware of it.

## Twentieth Century Engine

No. 5429, which has disc wheels like all others of this series, has a bullet-shaped nose, and it is said to be one of the engines used on the Twentieth Century Limited, as well as the Empire State Express. The tender of the engine is also streamlined to harmonize with the scheme of the stainless steel equipment on these popular limiteds. The grey color predominates. All of the boiler and outer riggings of the streamlined locomotive are enclosed according to a similar outline of the large new C.N.R. and C.P.R. streamlined models. It is streamlined so that it has the least resistance to the wind when traveling at a high rate of speed. The reason for its operation through here is not known except that all U. S. lines are hard hit for power and it is possible that this was the only engine available for No. 17 to come from Buffalo to Windsor on Wednesday. Anyhow, it is understood that a fast run was made in both directions on the sturdy Canada Division road-red.

## Hopes Are Boosted

If it wasn't for the war, it is more than likely that solid streamlined trains would be passing through here now on the M.C.R. Both the Empire State Express and the Detroitter carry much streamlined equipment, but there hasn't been enough streamlined equipment available at this time to complete the consist of both trains. When and if this is ever done, streamlined engines, similar to the one which passed through here on Wednesday will be assigned to these trains for daily trips over the divisions. The trains earmarked for these engines are Nos. 47 and 48, and Nos. 50 and 51. It is likely that Nos. 8 and 17, the Wolverine, would be next in line for the equipment. The presence of the engine for at least one day has boosted the hopes of railroaders that this change will be made at least as soon as the war is over.

## Heaviest Volume

Evidence that American steam roads are handling the heaviest volume of traffic in their history is seen on the local divisions of the Pere Marquette, Michigan Central and Wabash lines. They are handling more freight than ever before. Freight traffic, as forecasted, is steadily rising and with some bad weather certain to be encountered, more train and engine crews will be in service than ever before. Timekeepers really know the extent of their business and their lists of time tickets are heavier than at any time in 30 years. It has been learned. In addition to heavy freight traffic, the M. C. R. continues to move passenger and express specials. Thursday morning most trains were reported fairly well on time despite bad weather at remote points, as well as between the two borders.

## Rail Briefs

• A rail-flaw detector car has reached the Canadian Division of the Pere Marquette Railway System from the eastern frontier, to test the rails be-

tween St. Thomas and Windsor. All lines are using this service more frequently than ever this winter due to heavy traffic and sudden changes in the temperature.

Frank McElroy, assistant general manager of the Michigan Central Railroad Company, with headquarters in Detroit, Mich., was in St. Thomas in his private car on Wednesday. He conferred with Superintendent J. E. Schwender and other officials regarding operational matters.

The welding gang of the M. C. R. engineering department is carrying out work at Welland this week.

The M. C. R. is going to assign a conductor to Nos. 11 and 12, working Tuesdays, Thursdays and Saturdays. Another brakeman will be assigned to the spare list in Detroit for Nos. 3, 35, 44 and 17.

W. E. Lewis, M.C.R. brakeman, has accepted an assignment on the east local with St. Thomas lay-over.

Several hundred railway cars for carrying race horses in England are now carrying army mules, heavy draft horses, food supplies and munitions.

The gasoline-electric combination coach and baggage car is back in service on the west end of the M. C. R. Since some time before Christmas a steam train has been operated as the passenger local, but the change back was made on Wednesday.

The M.C.R. engineering department is employing heating units to keep switches and other similar equipment thawed out in the severe weather.

## WAS TO HAVE BEEN POSTED AT MALTA

Flying Ace Killed On Eve of Promotion To Squadron Leader

BELLEVILLE, Ont., Jan. 7 (CP).

—FO. George T. Pepper, D.F.C. and Bar, ace night fighter of the R.A.F., was killed in a flying accident in England on the eve of his promotion to the rank of squadron leader and transfer to Malta.

His parents here received a letter from Pepper's commanding officer informing them that their son, killed last Nov. 17, was to have left for London the next day to sign transfer papers to the R. C. A. F. He was to have been given the rank of squadron leader and placed in command of a fighter squadron at Malta.

Every member of Pepper's squadron wrote a letter to the ace's widow in England. One of the letters said: "We share your grief and will do anything for the family as our beloved Pep was brave as a lion. He was one of Britain's best pilots."

Pepper, an international motorcycle racing champion before the war, went to England to instruct a motorcycle club. He was superintendent of a Spitfire factory before enlisting in the R. A. F. He and his observer, known as "Pepper and Salt" shot down three German planes in one night.

# ALL TRAINS ARE MOVING BUT SOME ARE BEHIND SCHEDULE

J. E. Schwender, N. Y. C. Superintendent, Reports Good Operations Despite Weather; Other Items

"Everything is moving, but some trains are running a little late," Superintendent J. E. Schwender of the Canada Division of the New York Central System, informed The Times-Journal on Thursday morning, as the weather turned from bad to worse again. Mr. Schwender said that all trains were moving along the division as well as could be expected under the severe weather conditions prevailing. Freight trains, as well as passenger and express trains, were getting through. Some of the passenger trains were behind their regular schedules, but for the most part the delays were suffered before reaching the Canada Division. The double-track stretch between the two borders is fairly level, with no bad cuts, as many have been eliminated in recent years. Where necessary flanges have been operated, but there is no danger of a now blockade. Thursday morning conditions were said to be about the same at all points and little likelihood of a change. Among some officials it has been forecasted that little relief can be expected for some weeks. They feel that the weather may ease up temporarily, but that a long and hard winter still lies ahead with no permanent break until on in March.

## Snowplows Are Out

The slowing up of rail traffic was inevitable on Thursday with the temperature hovering around zero, a strong east wind prevailing, accompanied by more snow. The large snowplows were in readiness to begin work if the flanges didn't do the job. The big C.N.R. plow was operated over the joint C.N.R.-Wabash Division on Wednesday and is likely to make another trip on Thursday. The plows have been used on the C.P.R. branch and the L. & P. S. R., for some time. Great caution is being taken in the local terminal yards where visibility was reduced to a few feet on Thursday, due to the wind and snow. Headlights of locomotives were kept burning and speed limits reduced entering and leaving the yards. As is generally the case, traffic invariably gets heavier in the bad weather. This is due partly to trucks shipping by rail because of the weather; also because travelers switch from airlines and buses to the trains in severe weather. On the other hand, all classes of traffic have been expanding in recent weeks on local lines and the upward trend is expected to continue and become more pronounced as 1943 advances.

## Another Streamliner

The second New York Central streamliner in recent weeks passed over the Canada Division of the Michigan Central Railroad on Wednesday. The engine was No. 5449, with a bullet-shaped "nose" and entirely enclosed. This engine hauled the second

section of No. 50, the Empire State Express eastbound, after taking No. 39, earlier in the morning. A short time ago No. 5429 went through on Nos. 17 and 8. It is believed to be used on the Twentieth Century Limited. No. 5429 is a slightly newer model, but No. 449 created considerable interest also. More would have seen the engine but for the bad weather prevailing.

## Rail Briefs

William Patterson, M.C.R. supervisor of track, went over the west end on Thursday morning.

The M.C.R. is going to assign a brakeman to the east local with Montrose lay-over.

On the New York Stock Market on Wednesday C.N.R. 5's of October, 1969, lost 1-8, and C.P.R. 5's of 1954 were down 1-4.

Train No. 50, the Empire State Express westbound, on Thursday morning hauled private car No. 8 with a party of officials en route from Detroit, Mich., to the eastern frontier.

Engine No. 1039, one of the large Pere Marquette freight moguls hauled a long train through the M.C.R. yards on Thursday morning. Despite bad weather, these big engines are able to pull a long train with comparative ease.

JAN  
21  
1943

# TWENTIETH CENTURY FLYER MAKES TRIP OVER M. C. R. LINE

FEB 9 1943

Famous N. Y. C. Limited Routed Through Here Monday  
Night as Rush of Traffic Continues; Other Items

Included in the rush of traffic over the Canada Division of the New York Central System (Michigan Central Railroad) during the past 24 hours was a section of the famous Twentieth Century Limited, crack N. Y. C. luxury flyer, which operates regularly via the south shore of Lake Erie. The section is believed to have been operated through Canada owing to difficulties on the American side between Buffalo and Chicago, but no details could be learned except that the train, which among other things has been in the movies, passed through St. Thomas somewhere around eleven o'clock Monday night. The big electric sign on the rear of the train announcing it as the Twentieth Century Limited could be seen for some distance. It is believed that there were about ten cars on the limited, all streamlined and similar to the high class equipment operated on the Detroit and the Wolverine. Local division crews took charge of the train and Charles Fearn, of St. Thomas, was the conductor. One of the large Hudson type passenger moguls pulled the train, which is believed to have made better than a mile-a-minute on its dash through here from Windsor to the eastern frontier. No official stop was made in St. Thomas except to inspect the cars and the engine. No passengers were allowed to get off in Canada.

## Immense Freight Volume

During the past 25 years or so, a section of the Twentieth Century Limited has passed through St. Thomas possibly a half dozen times, owing to some trouble on the four-lane N. Y. C. artery south of Lake Erie. On every occasion the Twentieth Century has been handled with ease and dispatch by local officials despite a heavy run of other traffic moving at the same time. A fast freight train was said to be "in the hole" at Comber when the Twentieth Century sped by. It was traveling fast, but no faster than the Detroit and Wolverine. It is understood. There is a speed limit of 80 miles an hour in force at the present time for passenger trains. Proof that other traffic was also brisk was revealed in the estimate that between 30 and 35 through freight trains moved over the division in a 24-hour period ending early on Monday morning. This was supposed to be a quiet day, too. In addition there were passenger trains, express trains, local passenger trains, mixed and wayfreight trains, and branch line trains in operation. Fine performances were reported at all points on the division. Express traffic appears to be getting heavier all the time and as many extra trains as the "law allows" are being run. It is believed that spring merchandise is now moving in large quantities to big stores in the west from the factories in the east.

## Aggregate Totals Higher

The Association of American Railroads in Washington reported the other day that 734,582 cars of revenue freight were loaded during the week ended January 30. This was an increase of 31,004 cars, or 4.4 per cent, compared with the preceding week; a decrease of 80,983 cars, or 9.9 per cent compared with a year ago, and an increase of 20,228 cars, or 2.8 per cent, compared with 1940.

## Rail Briefs

Thorold Batzold, supervisor of track for the east end of the Canada Division



# FURTHER TRAFFIC RISE ON ITS WAY WITH BAD WEATHER

FEB 11 1943

## Local Terminals Hum With Activity Thursday; Sudden Change General on Divisions; Other Items

The upward trend in freight traffic this week kept pace with the latest sudden change in weather conditions, and freight trains were in and out of the local terminal yards in a steady procession on Thursday. Thursday is the day when the upward trend begins in earnest each week, and the rise continues through each week-end. From midnight on, the weather was real wintry, but later on Thursday the wind died down somewhat and visibility improved, although at times the blustery conditions returned. Early on Thursday morning visibility was reduced to a few feet in the wards and great care had to be taken in switching cars and getting trains in and out. As usual, traffic on the Canada Division of the New York Central System began to move in a huge volume particularly eastbound. The storm was general on all of the local divisions.

The afternoon eastbound rush promised to be as big as any in recent weeks. While no official figures could be obtained, it is believed that the M. C. R. is moving thousands of cars daily. A conservative estimate would be about 2,500 cars daily, comprising just through freight with possibly 200 to 300 local cars handled on mixed wayfreight and branch line runs. These estimates are likely surpassed over the week-end.

### C. F. Weaver is Appointed

Appointment of C. F. Weaver as assistant general superintendent of car equipment with headquarters in Toronto, and W. G. Palmer as superintendent of car shops, London, Ont., succeeding Mr. Weaver, has been announced by W. C. Sealy, general superintendent of motive power and car equipment, and approved by F. L. C. Bond, vice-president and general manager, Central Region. It was also announced that George McCready would succeed Mr. Palmer as general foreman, Montreal car shops. A native of London, England, Charles Frederick Weaver, began his career as a carpenter in the Montreal car shops on January 6, 1919. He subsequently served successively as assistant foreman, foreman, general foreman, superintendent of car shops, until October 1, 1928, when he was appointed superintendent of car equipment, Montreal district. He was transferred to London, June 1,

1937, as superintendent of car shops. William George Palmer was born at Sevenoaks, England, and joined the company December 3, 1913, as carpenter in the Montreal car shops. He served in the last war from 1915 to 1919, resuming his position with the C. N. R. June 2, 1919, upon demobilization. He later became inspector and foreman, successively, following which he went to Ottawa as general car foreman in October, 1928. He returned to Montreal car shops as foreman in May, 1929, becoming acting shop superintendent in August, 1938, and general foreman in February of the following year. Born at Birkenhead, England, George McCready began his rail career as coach carpenter in the Montreal car shops, on November 1, 1922, and was promoted to inspector in April, 1929. He was made assistant foreman, St. Henri coach yard, in October of the same year and was appointed foreman, passenger shop, Point St. Charles, July 6, 1937, which post he held at the time of his present promotion.

### On 20th Century

Two engine crews of the M. C. R. have had their chests out since early in the week when they handled the engine of the Twentieth Century Limited over the local division. On the west end, Engineer J. Hardy and Fireman L. Fowler were accompanied by Traveling Engineer William Kelly, while on the east end Engineer William Carter and Fireman Westaway were accompanied by Traveling Engineer Kelly and Traveling Fireman Jack McGugan. Engine No. 5254 hauled the flyer.

### Bill Stollery Writes

Sergeant Bill Stollery, who is with the Elgins Overseas, has written to friends at the M. C. R., where he formerly worked, telling about conditions in England. He reported plenty of meat with the exception of pork. He recently made a tour of London to see the damage wrought by the Huns.

### An Important Meeting

A. J. Newkirk, local chairman of the M. C. R. has announced an important meeting of Unity Lodge No. 47, for Monday, February 15. All M. C. R. members are urged to attend because there will be a discussion relating to extra yard work at Suspension Bridge and Montrose.

# ENGINEERING DEPARTMENTS HAVE PROBLEMS THIS YEAR

This is the time of the year when engineering departments of local steam roads begin drafting plans for the spring, summer and fall track programs. In addition to weather problems, the officials must take into consideration the probable delay in receiving materials due to the war, and also the difficulty in obtaining manpower to operate the extra gangs to lay rail, distribute ballast and insert ties. So far as is possible the departments are distributing material that is available and in this way no freight cars are tied up with materials, but are released quickly for re-loading with other shipments. Enquires on Saturday failed to reveal the extent of the work to be done this year. The officials just do not know where they are at. It is believed that with all lines enjoying increased revenue that as much rail will be laid on the Michigan Central and Pere Marquette as can be obtained. The Wabash re-laid the entire division a few years ago, and only patches here and there are replaced each year.

## Use Much Ballast

It is expected that the Wabash, as usual, will concentrate on the distribution of ballast, raising the track and inserting ties. The Pere Marquette is expected to lay over ten miles of rail if it arrives, and crushed stone ballast will be distributed also. The M. C. R. will likely lay twenty miles of rail if it can be obtained. Some ties and rail have been distributed where it will be laid in the spring and summer. Considerable difficulty was encountered in obtaining sufficient men for the gangs last year and it is feared that the situation may be worse this year. However, plans are going along and there has been one break from the weather man so far. The ice and snow has kept the ground warm and it is believed that if a pronounced thaw stays way until March that the ground under the ice and snow will contain little frost and the usual heaving and other trouble will be averted. Frequent inspections have been made up and down the divisions to watch the ground conditions. In severe weather the track had to be watched closely because of the danger of rails cracking.

## Not Much Different

The latest New York Central streamlined engine to go through St. Thomas was No. 5426, which was used on No. 139 and No. 48 this week west and east on the division. Local engine crews who have been assigned to this type say there is little difference except in the windows. The previous streamlined engine to go through here

was No. 5429. On Saturday morning one of the "5400" class brought in No. 50, the Empire State Express. It was not streamlined, but it had disc wheels. The number was 5421. The power situation is a big problem on all lines. The New York Central continues to fix up old type engines to be used in case of an emergency but the time limit is short for installing automatic stokers unless an extension is obtained. The Pere Marquette has been equipping some of its engines with stokers and other modern devices but the shop work is now being held up by an epidemic of colds and flu. Many P.M.R. shopmen have been off sick. The Wabash is getting some power repaired in Decatur, Ill., as well as at the M. C. R. shops, here.

## Rail Briefs

J. G. Acheson, chief clerk to Master-mechanic Ernest Woodruff, and storekeeper of the Canadian division of the Pere Marquette Railway Company, was in Windsor the other day looking over supplies.

A number of extra passenger and express trains as well as a heavy run of freight was reported booked at the M. C. R. on Saturday morning. The P. M. R. rush continues unabated also. Some "lights" had to come west because of a large volume of business moving east.

FEB 13 1943

# ONE OF TWENTIETH CENTURY ENGINES HAULS M. C. R. TRAIN

Big Monster Brings Empire State Express From Windsor to St. Thomas Saturday; Tender Like Pullman

It isn't often that the coal tender of a locomotive could be compared with an all-steel Pullman car or luxury coach, but that's the case with the tenders of the New York Central System streamlined engines which haul the Twentieth Century Limited. One of these huge moguls went up and down the Canada Division of the Michigan Central Railroad last Friday and Saturday morning. It was No. 5452, and although not of the mona metal type which haul the Empire State Express between Cleveland, Buffalo, it is nevertheless a beautiful job. The engine is supposed to have gone to Windsor late Friday night on No. 139, the North Star Limited from New York, and it returned through St. Thomas hauling No. 50, the Empire State Express, on Saturday morning. Just what the big "Century" engine was doing so far away from "home" is not known, but it surely gave those along the Canada Division a thrill. There are said to be seven of these big N. Y. C. engines in service and occasionally one slips over this way. The big mona metal engines which haul the Empire State Express are Nos. 5456 and 5429. The latter has also made a trip through here.

## Just 42 Tons of Coal

No. 5452, which reached St. Thomas at 10:20 a.m. Saturday, is over a 100 feet long, and the reason that the huge tender looks like a streamlined coach is that the sides slope in and the back and top are rounded. This is done to conform with the all-streamlined train which it hauls regularly. An idea of the size of the tender can be gained from the fact that it holds 17,500 gallons, seven pairs of trucks under the tender, seven pairs of trucks under the tender in the following ratio: two pairs in front, three pairs in the middle, and two pairs in the rear. The two pairs under the front of the tender near the cab are entirely separate, but the others are located more closely together. There are three pairs of disc driving wheels under the engine along with a pair of trucks under the front end and another pair under the engine cab. The front end of the engine is rounded like a torpedo and all of the outer riggings are enclosed. Just how fast the engine will travel nobody seems to know.

## Engine Crew Delighted

The engine crew brought No. 50 to St. Thomas Saturday right on the dot. The train had made up all of its delay-time by the time it reached Fargo. The rest of the way into St. Thomas was easy sailing. The engineer had to hold the throttle back. It is understood, otherwise he would have reached St. Thomas ahead of time. There were thirteen cars on the train. The entire engine, by the way, including the trucks under the tender, have Timken ball-bearing axles and in fact the engine rides as smoothly as the streamlined cars it hauls. The Times-Journal also observed the engine crew getting out of the cab and their faces weren't even dirty. The disc driving wheels

are almost solid with a small hole at one point. Although no official statement was made it is possible that the engine may have covered the division in a test run and that more may make their appearance later. It is certain that streamlined engines will be on the local division after the war.

## Accident is Averted

A serious accident was narrowly averted when a flat car being pushed by a slowly moving engine on the Essex Terminal Railroad tracks bumped against the front end of a car driven south on Drouillard road by Mike Alesca, Windsor. The wig-wag signals at the crossing were in operation and Robert Brown, a brakeman, was standing on the front end of the flat car swinging a lighted lantern, but the driver thought he had time to cross.

## Rail. Briefs

Fred Regan, M. C. R. yard conductor, is ill in the Memorial Hospital with pneumonia.

George Murray, superintendent of telephones and telegraphs for the joint C.N.R.-Wabash Division, is making a splendid recovery from a serious illness.

Engine No. 2058, after being overhauled in the N. Y. C. shops, made some test runs on the west end between St. Thomas and Rodney on Friday afternoon and will return to main line freight service at once.

The M. C. R. is going to assign a brakeman to the Leamington local in place of Brakeman Charlton.

All classes of traffic are heavy on the M. C. R.; passenger and express traffic being so brisk that extra trains were reported Saturday. On the busy days freight traffic is reaching as high as 4,500 cars.

Oral exams for engineers and firemen on the M. C. R. are starting in St. Thomas on Monday. Visual re-exam tests are starting in Victoria on Monday for all employees.

Two puller jobs are being started in the Windsor yards of the M. C. R. and some runs for engineers and firemen are being changed.

D. J. ("Dinny") Moynihan, chief detective and captain of the police department on the Canada Division of the New York Central System, was in Fort Erie this week to attend the banquet in honor of George H. ("Slim") Shultis, retiring general yardmaster of Victoria Yard.

## "Very Strong" Quake Felt

WESTON, Mass., Nov. 6 (AP).—A "very strong" earthquake about 9,730 miles from Boston, and probably in the Banda Sea, East Indies, was recorded on the seismograph at Weston College today. Rev. Daniel F. Linehan, S.J., seismologist, reported the quake was first recorded at 4:40:30 a.m. E.D.T. and apparently was still going on three hours later.

NOV 6 1943

C. Riff co