GRAND TRUNK WESTERN RAILWAY DIARY

I

C. H. RIFF

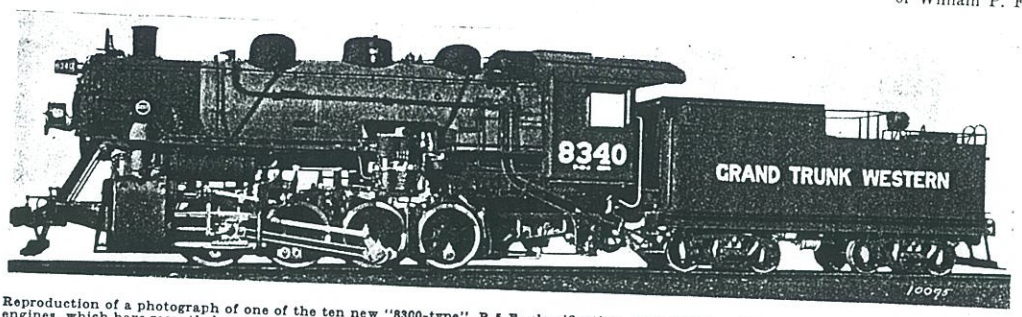
Locomotives
Rebuilt cars
Black River
Ice Plant
Muskegon
Stop

The Grand Trunk Western Lines

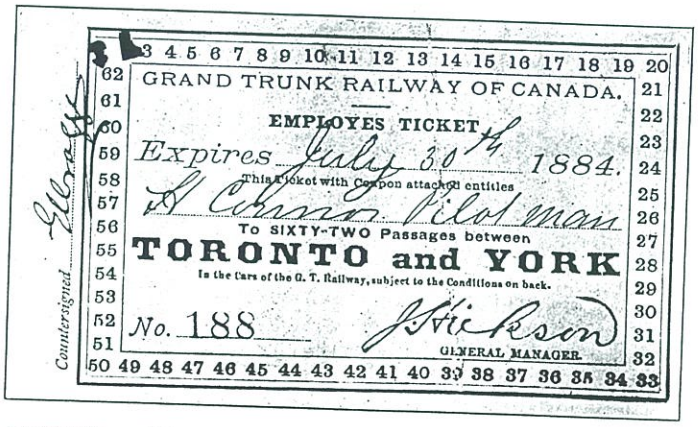
A Special Department Devoted to Chronicling the Events of the Last Month in Business, Social and Sporting Activities

A "BOOSTER meeting" of the Port Huron Terminal Social and Athletic Association was recently held at the Car Shops with 51 employees from the various departments present. Subjects concerning the summer season activities, including baseball, soft ball and tennis were discussed. It was also decided to hold another "Maytime Dinner" dance for which a special committee was appointed. The President of the local Association, H. G. Love, presented the General Manager's Trophy to the local bowling team, in honor of winning the championship of the Western Lines. President Love also presented Fred Gast with a gold medal, with the compliments of a local bowling alley, for having the highest individual average in the Terminal League, 186 pins. Following the meeting, entertainment was furnished by Kenneth McManus, of the yard office, on the piano, and Frederic Nern, high school student, who is an accomplished saxophone player. The Association has an enrollment of 761 members, with incomplete reports, from two departments. It is expected that the Grand Trunk Recreation Park will be used extensively by employees this season.

The Grand Trunk Baseball Club is again the only team playing independent ball in the city and, on May 6th, the season was opened with an exhibition game with the Detroit Nationals, a fast semi-pro club. Going into the last half of the ninth innings with the score 6 to 12 in favor of the Nationals, the Trunks took advantage of a new pitcher that the Nationals offered and with several walks, mixed with a rally of hits, turned in seven runs to win, sending home a crowd of several hundred fans, who were satisfied that the saying is absolutely correct that "a ball game is not won until the last man bats in the ninth." The feature of the game was the hitting of Jack Meyers, a new player on the club who is employed by the Car Department, who was credited with three triples and a single out of five times up. Jack is going to cause a lot of trouble for pitchers in the Grand Trunk League this season, if he lives up to his record of last season with the Lasalle Illinois Indians and Detroit Clowns. Gilmer Hughes, another new player added this season, has had considerable experience behind the bat and formerly played with the N. & W. Ry. team, at Coalfield, Va. With these new players and the veterans on the Club, Manager Otto Kowitz ought to be able to defend the Dalrymple Trophy on the Western Lines to a successful end. Congratulations are extended to the employees at Durand for entering a team in the 1928 race, after an absence o one year.



Reproduction of a photograph of one of the ten new "8300-type", P-5-E- classification, Baker valve motion and clear-vision type tank switch engines, which have recently been placed in service on the Grand Trunk Western Lines. The tank has a capacity of 8,000 gallons of water and nine tons of coal.



Conductor Thomas E. M. Graw of the Grand Trunk Western Lines, residing at Port Huron, has in his possession the above employee's ticket, which was issued to his uncle, H. Connor, in 1884 while acting as Pilot Man between Toronto and York.

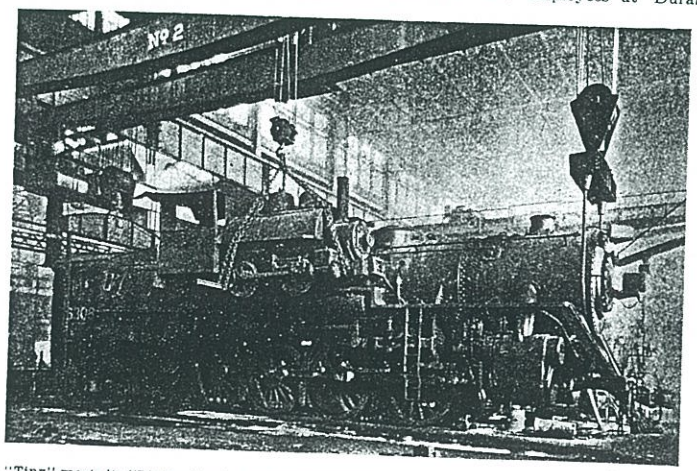
Chicago, Ill.

On March 27th there passed away a La Grange, Ill., one of the original pion eers of the Grand Trunk Railway Sys tem in the United States, in the perso of William P. Fox. The late Mr. Fo was 81 years of ag at the time of hi decease, and ha served the Gran Trunk Railway fo 41 years, before hi retirement on pen sion, 16 years ag Funeral servic were held in L Grange and he wa laid to rest in Schoo craft, Mich., th town where he wa raised and wher he had spent th summer month since his retire ment.

Mr. Fox was bor in Frankfort, N.Y on September 1847, and while mere boy moved to Schoolcraft, Mich., with his parent the late John Jackson Fox and Sarah Bunn Fox. It wa in this town that he first became connected with what wa then the old Peninsular Railroad, no a part of the Grand Trunk Western, an as soon as this line opened a statio at Schoolcraft, Mr. Fox was appointe agent. This was on July 1, 1871, an when the new agent took up his dutie no station had been erected. Until th building of the station had been com pleted, he was compelled to transac his business upon a pile of ties. He wa wont to relate how, in 1871, he did rushing business selling Fourth of Jul excursion tickets from his prompt headquarters, being compelled to use h hat for a money drawer.

Mr. Fox was later advanced to pos tions at Battle Creek, Lansing and Sout Bend, and when the road was finally ex tended to Chicago and permaner freight headquarters set up, Mr. Fo was selected to fill the position of cashie at the local office. Thus he was the firs cashier the Grand Trunk had in Chicag and he held this position continually until the year 1912, when he finall decided to retire and spend his remainin years in the town of Schoolcraft, whic knew him and loved him so well an whose citizens gave him the affectionat sobriquet of "Uncle Will." Mr. Fo made very many friends among h fellow-employees in Chicago and up t only a few weeks before his death he visited the local offic frequently to renew these old friendships. He wa

(*Continued on page 36*)

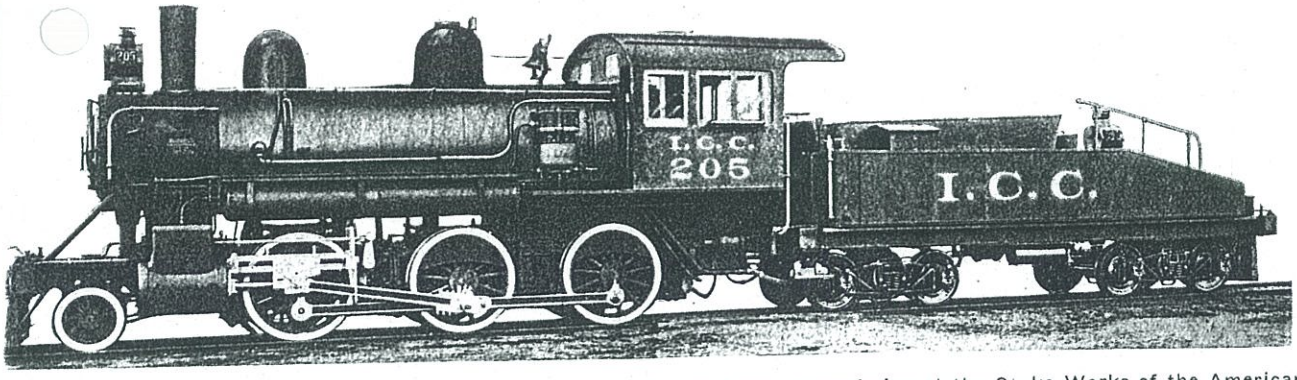


"Tiny" meets its "Big Brother": The above photograph depicts progress of the past 30 years, or more, by comparing this pony engine with the days gone by with the modern monster of the rails of today. The small engine is owned and operated by the Brownlee Park Gravel Company, at Battle Creek, Michigan. The engine is more than three decades old and has been working the entire time on narrow-gauge track, doing switching duty for its owners. It weighs but 6,000 pounds, running weight, which is quite a contrast to engine No. 6308, of the Grand Trunk Western Lines, weighing 666,500 pounds. Both of these engines recently left the Battle Creek repair shops after receiving a general overhauling.

Port Huron's bowling team, champions of the Grand Trunk Western Lines, for 1927-28, and win ners of the General Manager's trophy. Left to right, Walter Kowitz, Car Shops; Ike Snyde Stores Department; Ralph Clark, Transportation Department; Fred W. Gast, Rip Track; Merl O'Rourke, Car Shops; James Scahill, St. Clair Tunnel Company; and C. V. Sloat, Car Shop Chairman of Bowling.

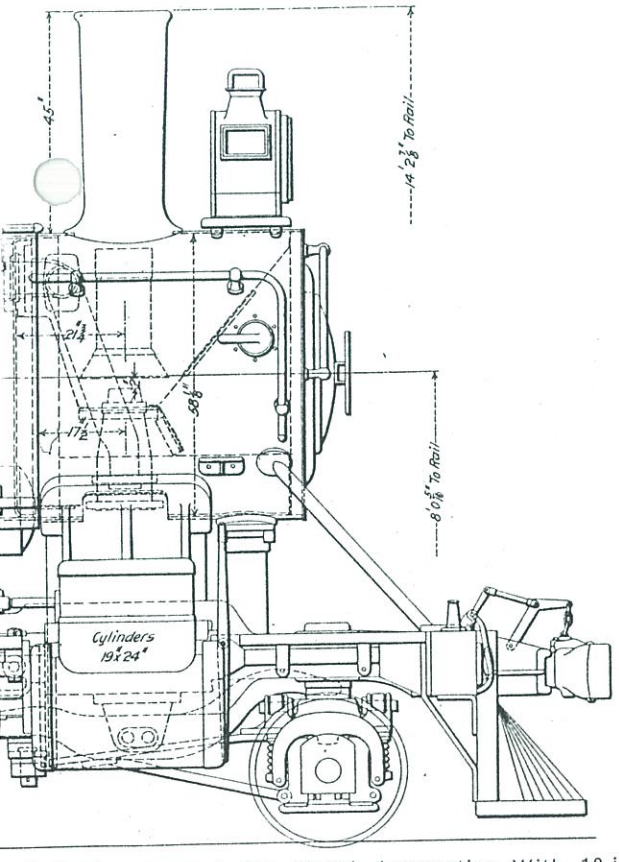
the practice of the same designers. In the case of the ine with 19-in. cylinders and a smoke-box diameter of he stack has a diameter of 14½ in. at the choke, and the the petticoat pipe is 2 in. above the top of the exhaust n the case of the heavy engine with 20-in. cylinders and box diameter of 67 in. the same size of stack is used, but large one.

To be sure, the formula makes no allowance for the resistances offered by the netting, and was not presented until after the completion of these engines, and so was not available for use, and the comparison merely serves to show the desirability of greater



Locomotive with 19-in. x 24-in. Cylinders Built for the Isthmian Canal Commission at the Cooke Works of the American Locomotive Company.

ance between the top of the exhaust nozzle and the bottom petticoat pipe is 15 in. Certainly these dimensions are difo harmonize when it is considered that the two machines burn the same grades of coal, are to run over practically ie tracks, and to perform the same sort of service. we take the formula set forth by the committee on smoke- ind apply it to these engines we find that the distance of of the nozzle below the center of the boiler is 2½ in. in the



End Arrangement for Mogul Locomotive With 19-in. Cylinders.

of the light locomotives, and 7½ in. in that of the heavy. If,

e diameter of the choke.
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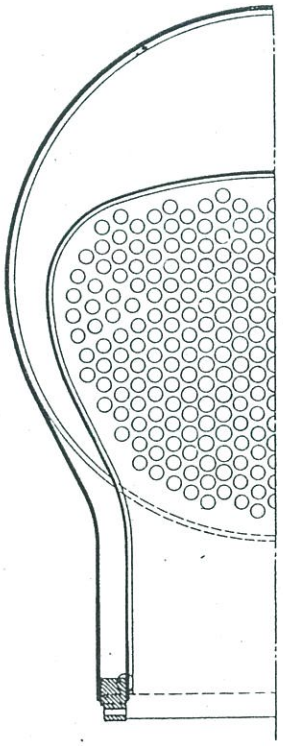
uniformity and the differences existing in the output of the same firm, differences which extend even to the rate of flare of the stack, the reason for which would be very interesting to have explained.

The larger engine also presents an example of dimensions that are high in mogul construction. The weight is not excessive, but 21,250 lbs. on each driving wheel is well up in the scale of modern practice. The boiler is of the extended wagon-top type, with sheets ⅝ in. thick on the conical section. While in the small boiler the firebox is carried by expansion pads and the mudring runs parallel to the top rail of the frame; that of the larger engine is carried by an expansion pad at the front and a rather heavy buckle plate at the rear, while the frame itself is cut away into a very irregular contour.

The outline of the firebox, illustrated in a special engraving, shows the great amount of flare at the top, and calls to mind criticisms that have been made of similar designs wherein it has been urged that the large amount of steam passing over the sheet in rising, keeps the water away, increases the temperature at the upper rows of staybolts, and tends to increase the breakages that occur at that point.



Half Section Through Firebox

It is also interesting to note the difference in the thicknesses of the several sheets of the firebox of the two engines for the same boiler pressure. The spring suspension is arranged to use semi-elliptic at all of the drivers, helicals being found only on the truck. This arrangement places a yoke over each of the two rear pairs of driver boxes with hangers reaching down to the ends of the semi-elliptics set between the rails of the frame. These springs thus put a downward pressure on the frames at each end, and by a multiplication of the motion at the hand, will contribute to the ease of motion of the machine, as has been found to be the case on caboose cars where a similar design of spring suspension has been used.

Another point to which attention may be called is the short tube used in both cases. The tubes are only 11 ft. 8 in. in the light engine, and 12 ft. $3^{3}/_{16}$ in. in the large engine, but the shortness of the tubes is compensated by the number, which brings up the old and still unanswered question as to the relative value, for evaporative purposes, of the several sections in the length of the

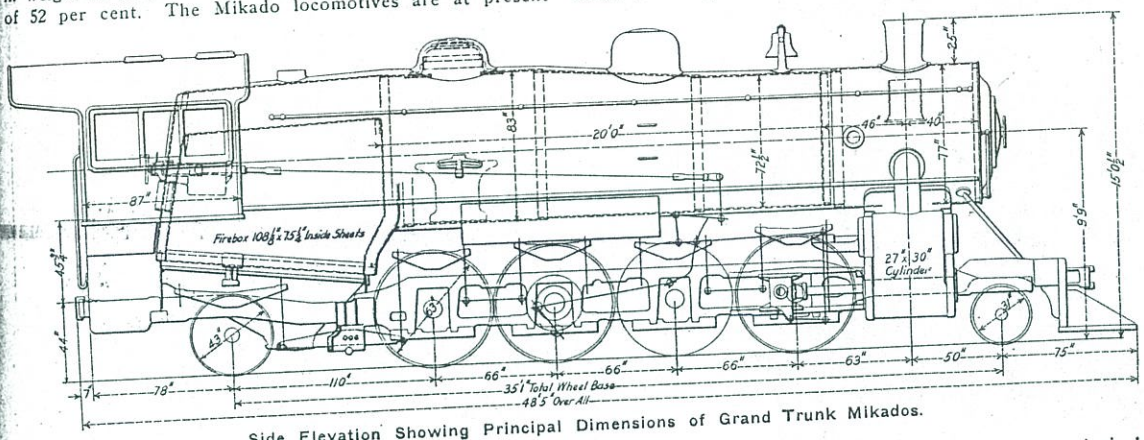
GRAND TRUNK MIKADOS.

Twenty-five locomotives of the Mikado (2-8-2) type have recently been delivered to the Grand Trunk by the American Locomotive Company and an order has been placed with that company for fifty more of the same design.

The freight traffic on the Grand Trunk has until recently been hauled mainly by Richmond compound consolidation (2-8-0) type locomotives, which have a total weight, including the tender, of 349,800 lbs. and a tractive effort of 34,000 lbs. The Mikados have a total weight, including the tender, of 455,100 lbs. and a tractive effort of 51,700 lbs., an increase in weight of 30 per cent., and an increase in tractive effort of 52 per cent. The Mikado locomotives are at present doing their best work on the Western division which has a number of grades which do not exceed 0.6 per cent. except in one case, where a five mile 0.95 per cent. grade requires helper service. The tonnage rating is shown in the accompanying table. These runs are being made at an average speed for the consolidations of 20 miles per hour, and for the Mikados of 22 miles per hour.

	Miles	Helper Service	Consolidation	Mikado	Increase, Per Cent.
Port Huron		None	2000 Tons	2800 Tons	40
Port Huron to Nichols	156.5	None	1700 Tons	2500 Tons	47
Nichols to Elsdon	168.5	For 5 Miles	2000 Tons	2800 Tons	40
Elsdon to Nichols	168.5	None	2000 Tons	2800 Tons	40
Nichols to Port Huron	156.5				

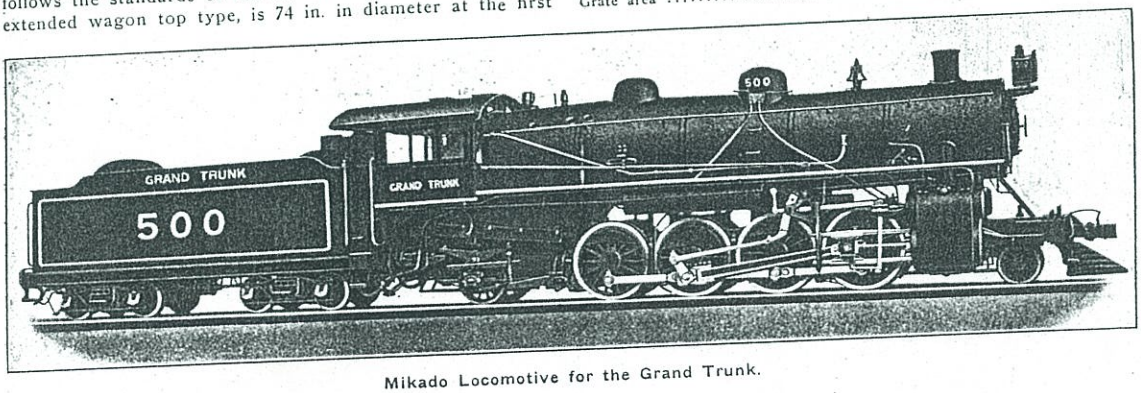
The consolidations use saturated steam and have a total heating surface of 2,952 sq. ft.; the Mikados have an equivalent heating surface (evaporative heating surface plus 1½ times the superheating surface) of 4,776 sq. ft., an increase of 62 per cent. over the consolidations with an increase in the grate area of only 11-½ per cent. The design in general follows the standards of the builders. The boiler is of the extended wagon top type, is 74 in. in diameter at the first ring and 83 in. in diameter outside at the largest course. There are 240 2 in. tubes, 20 ft. long, and a thirty-two unit, Schmidt type, top header superheater. The firebox is 108⅛ in. by 75¼ in. and is fitted with a brick arch, a pneumatically operated fire door and a power operated grate shaker. An interesting feature is the arrangement of the throttle lever support, which combines the lever fulcrum and quadrant support in an integral casting. This makes a saving in the number of parts and also a reduction in the number of holes in the back head of the boiler. The support fits around the stuffing box as a sleeve, and can be turned to any desired angle to bring the lever to a convenient position. The locomotives are also equipped with outside steam pipes, screw reverse gear and self-centering valve stem guides.



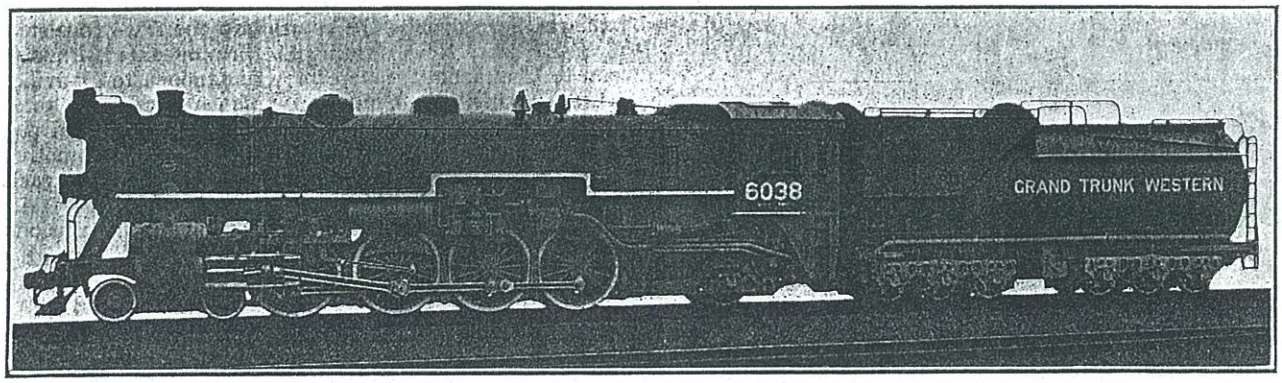
Side Elevation Showing Principal Dimensions of Grand Trunk Mikados.

The following table gives a comparison of the principal data with that of the consolidations:

	2-8-2	2-8-0
Tractive effort	51,700 lbs.	33,970 lbs.
Weight in working order	283,000 lbs.	209,400 lbs.
Weight on drivers	213,500 lbs.	183,700 lbs.
Wheel base, driving	16 ft. 6 in.	17 ft. 0 in.
Wheel base, total	35 ft. 1 in.	25 ft. 9 in.
CYLINDERS.		
Diameter and stroke	27 in. x 30 in.	22.5 in. and 35 in. x 32 in.
WHEELS.		
Driving, diameter over tires	63 in.	63 in.
Driving journals, main	11 in. x 20 in.	9½ in. x 12 in.
Driving journals, others	10 in. x 12 in.	9 in. x 12 in.
BOILER.		
Style	Ext. Wagon Top	Ext. Wagon Top
Working pressure	175 lbs.	210 lbs.
Outside diameter of first ring	74 in.	68⅜ in.
Tubes, number and outside diameter	240-2 in.	353-2 in.
Flues, number and outside diameter	32-5⅝ in.	
Tubes, length	20 ft.	15 ft.
Heating surface, tubes	3398 sq. ft.	2757 sq. ft.
Heating surface, firebox	215 sq. ft.	168 sq. ft.
Heating surface, total	3640 sq. ft.	2952 sq. ft.
Superheater heating surface	757 sq. ft.	
Grate area	56.5 sq. ft.	50.6 sq. ft.



Mikado Locomotive for the Grand Trunk.



Mountains Type Locomotive for Use on the Grand Trunk Western Lines of the Canadian National

August 15 1925

Mountain Type Locomotive for Canadian National

THE Canadian National has recently received from the Baldwin Locomotive Works, Philadelphia, Pa., five Mountain type locomotives for service on the Grand Trunk Western Lines in the United States. They are built to traverse curves of 18 deg. and while not exceptionally heavy locomotives of their type, are notable examples of this class of power. As they are to be used in United States they are designed and equipped throughout to conform to the Interstate Commerce Commission's requirements.

These locomotives weigh 354,110 lb., of which 231,470 lb. is on the drivers, 61,590 lb. on the front truck and 61,150 lb. on the rear truck. They carry 210 lb. boiler pressure; the diameter and stroke of the cylinders are 26 in. by 30 in. and the driving wheels are 73 in. in diameter. With a maximum cut-off of 85 per cent, they develop a tractive force of 49,600 lb.

The boiler has a straight top, with a maximum diameter, at the rear end of the barrel, of 90 in. The firebox has a combustion chamber 36½ in. long, and contains a brick arch which is supported on four tubes. Flexible staybolts are applied in the breaking zone, with a complete installation in the combustion chamber; while four transverse rows of flexible stays support the front end of the crown sheet. The large flues are electrically welded at the firebox end. The boiler accessories include a Duplex stoker and Elesco feed-water heater.

The steam distribution is controlled by 14-in. piston valves operated by the Walschaert gear. The valves are set with a lead of ¼ in. and a power reverse mechanism is applied. The piston heads are of rolled steel, and the main and side rods of open hearth hammered steel, the main rods having solid back ends with floating bushings. The driving axles and main crank pins are hollow bored.

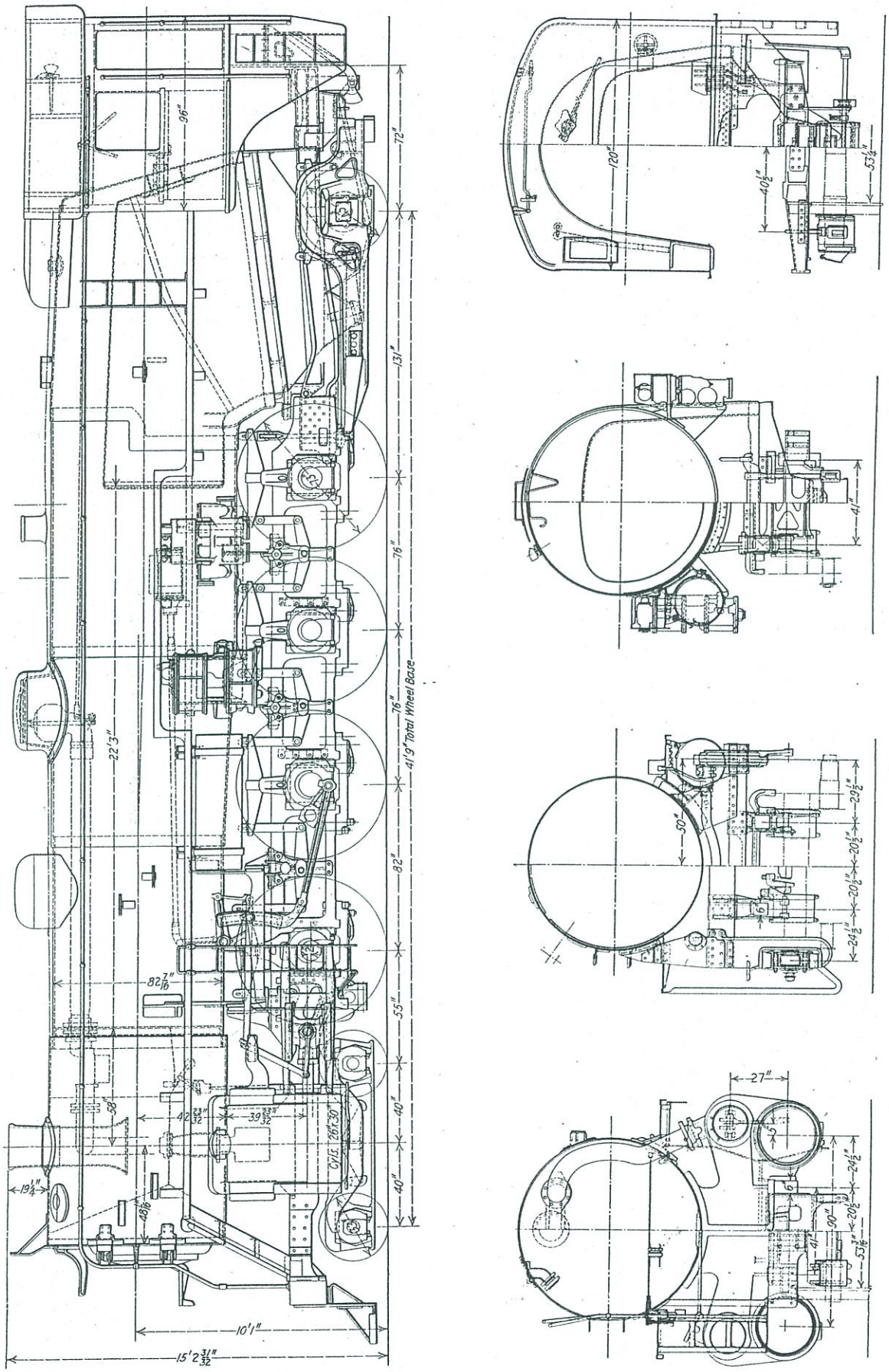
The main frames are of vanadium cast steel with single front sections, and the Commonwealth rear frame cradle is applied. Self-adjusting driving box wedges are used throughout, and the front driving boxes are of the lateral motion type.

The cab is designed in accordance with Canadian National standards. It is built of steel, wood lined and asbestos insulated, and has a vestibule connection with the tender, so that it can be entirely closed in. It is entered through side doors. Special attention has been given to the arrangement of all fittings and piping, and the comfort and convenience of the crew have been carefully looked after.

The tender is of the Vanderbilt type with cast steel frame and six-wheel trucks. It has a capacity for 18 tons of coal and 11,300 Imperial gallons of water (approximately 13,500 U. S. gallons).

The principal dimensions and data for the locomotives are shown in the following table:

Type of locomotive	Mountain
Service	Passenger
Cylinders, diameter and stroke	26 in. by 30 in.
Valve gear, type	Walschaert
Valve, piston type-size	14 in.
Lead in full gear	¼ in.
Cut-off in full gear, per cent	85
Weights in working order:	
On drivers	231,370 lb.
On front truck	61,590 lb.
On trailing truck	61,150 lb.
Total engine	354,110 lb.
Tender	250,490 lb.
Wheel bases:	
Driving	19 ft. 6 in.
Rigid	12 ft. 8 in.
Total engine	41 ft. 9 in.
Total engine and tender	80 ft. 3¾ in.
Wheels, diameter outside tires:	
Driving	73 in.
Front truck	33 in.
Trailing truck	43 in.
Journals, diameter and length:	
Driving, main	12 in. by 13 in.
Driving, others	10 in. by 13 in.
Front truck	6½ in. by 12 in.
Trailing truck	9 in. by 14 in.
Boiler:	
Type	Straight top
Steam pressure	210 lb.
Fuel, kind	Bituminous
Firebox, length and width	114⅛ in. by 84¼ in.
Height mud ring to crown sheet, back	61 in.
Height mud ring to crown sheet, front	83½ in.
Arch tubes, number and diameter	4
Combustion chamber length	36½ in.
Tubes, number and diameter	40, 5½ in.
Flues, number and diameter	188, 2¼ in.
Length over tube sheets	22 ft. 3 in.
Grate area	66.7 sq. ft.
Heating surfaces:	
Firebox and comb. chamber	280 sq. ft.
Arch tubes	27 sq. ft.
Tubes and flues	3,731 sq. ft.
Total evaporative	4,038 sq. ft.
Superheating	1,048 sq. ft.
Comb. evaporative and superheating	5,086 sq. ft.
Special equipment:	
Brick arch	Yes
Superheater	Yes
Feedwater heater	Yes
Stoker	Yes
Booster	No
Tender:	
Style	Cylindrical
Water capacity	13,500 gal.
Fuel capacity	18 tons



Elevation and Cross Sections of Mountain Type Locomotive for Use on the Grand Trunk Western Lines of the Canadian National

Canadian Transportation

New Locomotives, C.N.R. Grand Trunk Western Lines

The 25 class U-3-b, 4-8-4, *locomotives built for the Grand Trunk Western by American Locomotive Co. embody notable improvements, and are described below.*

THE 25 4-8-4 locomotives built by the American Locomotive Co. at its Schenectady plant, for the Grand Trunk Western Lines, are numbered in the series 6312-6336; they are a modern edition of a locomotive type which has given satisfactory service on Canadian National Rys. lines since 1927, and they embody features which have been tried and found good on the C.N.R. as well as others developed by the builders.

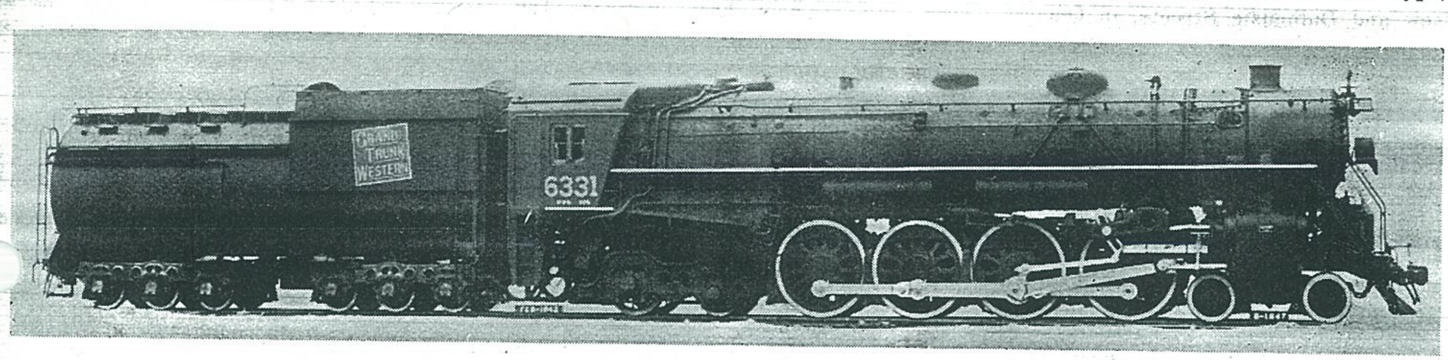
In 1939 the Canadian National reconstructed, at the Montreal Shops, one of the U-1-b class, 4-8-2, locomotives originally built in 1924. The object of this reconstruction was to determine the value of recommendations made with respect to steam passage areas between boiler and cylinders, as the result of extensive experiment and tests on the French State Railway.

A careful check of dry pipe, steam pipe, cylinder ports, superheater header and elements, showed that many restrictions and changes of directions existed in the path of steam flow from boiler to cylinder, which readily accounted for the difference in pressure, or drop, between these points, so noticeable in the majority of steam locomotives.

New dry pipe and steam pipes of considerably increased area and as direct and uniform in section as possible, new cylinders with enlarged steam and exhaust ports curved or streamlined to offer minimum resistance, and an enlarged steam chest to provide storage volume, a new type "E" superheater using 1⅜ in. o.d. elements in 4 in. o.d. flues, with header passages enlarged and otherwise improved, were applied, and some slight alterations made to the valve gear.

In service, the reconstructed locomotive showed such marked economy in fuel, together with increased power output at all speeds, that it was decided to incorporate these features in any power constructed in future.

In addition to the above, the running gear of the new locomotives has been designed in accordance with the "Lever Principle", developed by the builders.



One of the New 4-8-4 Locomotives on the C.N.R. Grand Trunk Western Lines.

Controlled lateral movement is provided at engine truck, leading driver, main (second) driver, and trailing truck, the value of which, in each case, is proportional to its distance from the rear driver or pivot point about which the locomotive mass is assumed to rotate when curving. All driving tires are set uniformly at 55⅝ in., and all anchor points in the spring rigging are cushioned by nests of coil springs, and the hangers are designed to allow the maximum freedom of movement in all directions.

With the mass of the locomotive more effectively cushioned and controlled, the percentage of reciprocating weight incorporated in the counterbalancing has been reduced to 26, with a marked decrease in dynamic augment.

Since beginning operation between Port Huron and Chicago in fast freight service, the performance of these locomotives has more than met all expectations, and it is felt that improved all-round performance with increased power output, reduced fuel consumption as well as lowered maintenance charges in both locomotive and permanent way, will ensue as the result of improvements in design.

Thirty-five locomotives of a very similar type, under construction at Montreal Locomotive Works for service on Canadian National lines in Canada, will

Grand Trunk Western locomotives have 26 x 30 in. cylinders and 73 in. diameter driving wheels with Boxpok centers. The boiler pressure carried is 250 lb. per sq. in., and maximum tractive effort is 59,000 lb. Steam distribution is controlled by Walschaert valve gear. The boiler is a straight top, taper bottom type, in three courses, with outside diameter of 94 in. over the large course and first course inside diameter of 83 in. There are 46 2¼ in. o.d. tubes and 148 4 in. o.d. flues, the distance over tube sheets being 22 ft. The firebox is 126⅛ in. x 96¼ in., and there is a 48 in. combustion chamber. Grate area is 84.3 sq. ft. Two Nicholson Thermic Syphons are applied, and there are three 3 in. arch tubes.

Heating surfaces are as follows:—

Tubes	594 sq. ft.
Flues	3,395 sq. ft.
Firebox	318 sq. ft.
Arch tubes	22 sq. ft.
Syphons	73 sq. ft.
Total	4,402 sq. ft.
Superheating surface	1,955 sq. ft.

The driving wheelbase is 19 ft. 6 in., locomotive wheelbase 43 ft. 10 in., and wheelbase of locomotive and tender 82 ft. 4¾ in.

The weight on drivers is 245,000 lb.; on the leading truck, 69,000 lb.; on the trailing truck, 89,000 lb., and total locomotive weight is 403,000 lb. Weight of tender, with two-thirds load, is 221,500 lb. The tender is of the Canadian National Vanderbilt type, with coal capacity of 16 tons and water capacity of 14,300 U.S. gallons. The tender is carried on two General Steel Castings Corporation 6-wheel trucks.

The locomotive leading and trailing trucks are General Steel Castings Corporation products, as are also cylinders,

Diesel-Electric Switchers on Grand Trunk Western

The first Diesels in Canadian National service to employ the 2-stroke cycle Diesel engine principle.

Until recently, all engines employed in Diesel locomotives and self-propelled cars on Canadian National Rys. lines have been of the 4-stroke cycle type, but, employment of the 2-stroke cycle engine has been commenced with the acquisition, for Grand Trunk Western lines, of two Diesel-electric switching locomotives built by the Electro-Motive Division of General Motors Corporation, at La Grange, Ill. These locomotives are being used in the passenger and freight yards at Detroit; they were purchased through C.N.R. headquarters at Montreal as a result of a careful traffic and economic study. They have been in service since early in May. The Diesel engines installed are similar to those used in many high speed streamlined passenger trains in the United States.

The chief dimensions are:—

Track gauge	4 ft. 8½ in.
Length over coupler pulling faces	43 ft. 7½ in.
Width over side sills	10 ft.
Maximum height above rail	14 ft. 5 in.
Platform height above rail	4 ft. 7½ in.
Height of cab floor above rail	6 ft. 10 in.
Length of operator's cab	6 ft. 6 in.
Width of operator's cab	9 ft. 11 in.
Height of power plant hood roof above rail	11 ft. 4 in.
Width of power compartment	6 ft. 6 in.
Wheelbase—truck	8 ft.
Truck centers	22 ft.
Number of drivers	4 pairs
Diameter of drivers	40 in.
Size of journals	6½ x 12 in.
Minimum curve radius	100 ft.

The maximum permissible speed is 40 m.p.h. Approximate weights are:—Total, in working order, 200,000 lb., all on drivers; journal load per driving axle, 44,100 lb. Starting tractive effort, with 25% adhesion, is 50,000 lb., and with 30% adhesion, 60,000 lb.

The engine in each locomotive is a 600 h.p., 8-cylinder, V type, 2-cycle Diesel, with cylinders 8 x 10 in., operating at 750 r.p.m. and connected directly by flexible coupling to a direct current generator, the latter supplying current to four traction motors geared to the four driving axles. The engine is covered by a bonnet in which, on both sides, are large doors through which access is afforded to parts. The large cab provides good visibility in all directions. The locomotives are of very pleasing design and finish, a feature of the latter being the use of aluminum and gold paint, and, in the latter connection, it is felt that this special paint scheme provides an incentive to greater cleanliness, with a tendency toward reduced maintenance cost. The effect is heightened by use of a streamlined design in aluminum and black, and a final touch is added by the red and gold Grand Trunk insignia on the sides of the cab. The cab is fitted with comfortable upholstered seats for the crew members, and the good visibility referred to is obtained without the necessity of the crew members assuming abnormal body positions. The controls are simple and easy to operate, thus contributing to safety in operation. In the trucks, a special feature of design is the inclusion of the EMC Satco lined end-thrust arrangement, to protect the axle journal bearings. The particular advantage of the Diesel switchers in Detroit is that, owing to their ability to work into the idler cars when switching with steam is eliminated, thereby materially increasing the speed and convenience of these switching operations. Another advantage of these engines, which is common to all Diesel switchers, is that they can stay out of the roundhouse almost continuously for a month at a time, and attain a very high percentage of availability. This is due to the large quantity of fuel carried on the switcher and the ease with which fueling operations can be performed. There is no necessity to stop work to take on water or clean fires, and the daily and weekly inspections can in many cases be made without loss of time.

Grand Trunk Western Rd. Diesel-Electric Switcher.

When these two locomotives, the first Diesel-powered ones to be employed in the State of Michigan, were placed in service, the event formed the subject of a radio broadcast through station WXYZ, Detroit. C. G. Bowker, Vice President and General Manager, Grand Trunk Western, introduced the locomotives, their arrival having been broadcast with realistic effects, including the sound of the operating purr, bell and horn. After Mr. Bowker explained the purposes of the locomotives and their advantages, with H. True of the radio station acting as master of ceremonies, George E. Murray, Electrical and Mechanical Engineer, G.T.W., Battle Creek, provided the radio listeners with a description of the locomotive, employing popular terms. Others present at the ceremony were R. K. Evans, Vice President, Electro-Motive Corporation, and the following G.T.W. officials:—J. A. Clancey, General Superintendent of Transportation; P. D. Fitzpatrick, Chief Engineer; E. F. Gorman, Superintendent at Detroit; H. Smith, General Foreman, Motive Power Department, Detroit; E. F. McGregor, instructor of enginemen; C. A. Skog, General [illegible] Detroit; W. H. Ed- and others from the operating and traffic departments.

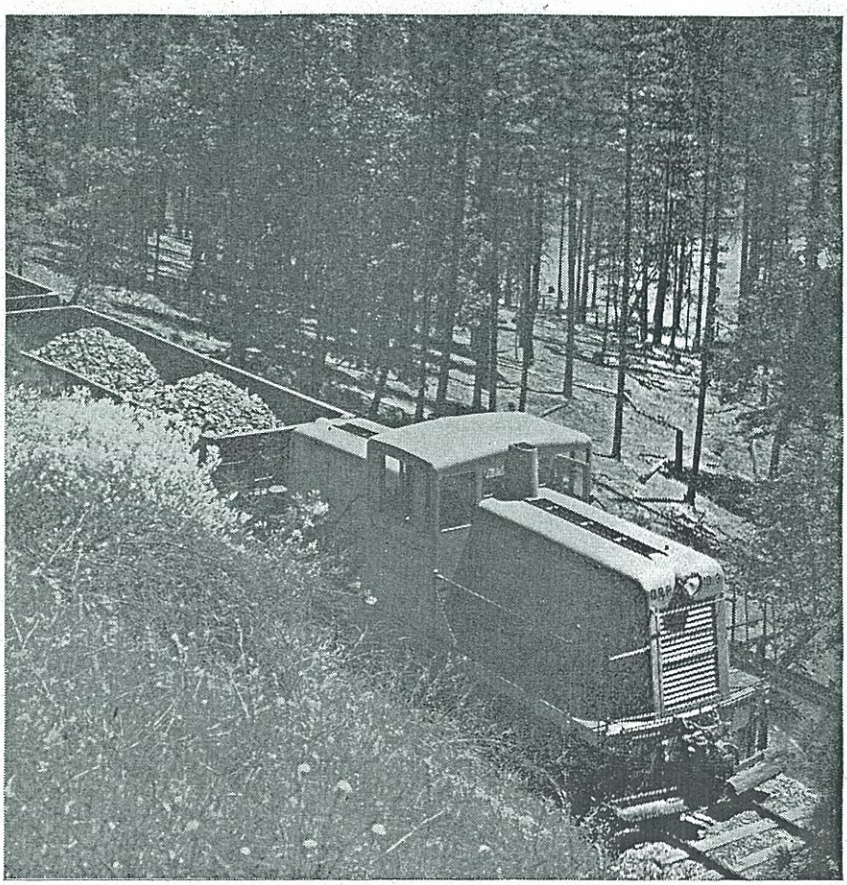
Air Transportation Items—Trans-Canada Air Lines ordered, at the end of July, an additional six planes, 12-psgr. Lockheed Zephyrs.—The Dominion Minister of Transport, Mr. Howe, while on his transcontinental tour, at the end of July, inspected the airport facilities in many western cities. Speaking in Brandon, Aug. 2, he indicated that mail and express service will be inaugurated on the T.C.A. route this autumn, to be followed by passenger service in due course.—S. J. Hungerford, President, T.C.A., stated in Vancouver, Aug. 22, that ground facilities in the Winnipeg-Vancouver section of the route would be completed around the beginning of September, with the completion of work on the Lethbridge airport. Training of pilots for the Winnipeg-Vancouver section is completed, Mr. Hungerford is reported as adding.—The new Uplands airport, at Ottawa, the Ottawa terminal for T.C.A., was opened officially, Aug. 20, by Mrs. C. D. Howe; Mr. Howe made a brief address upon the occasion.—Work on the Malton airport, Toronto, is well advanced.—Calgary has purchased 640 acres of land north of its city limits, at $31,725, and preparation of an airport has begun.—Rayner Construction Co., Toronto, has been awarded a contract for development of the T.C.A. airport at Moncton.—A Mexico City dispatch records receipt of machinery and equipment there by Canadian Car and Foundry Co. for an airplane production plant which the company is erecting there.

C.N.R. Express Dept.—Effective June 1, a temporary agency was opened at Mount Robson, B.C.—Effective Aug. 8, a temporary agency was opened at Fortier, Man.—Effective Aug. 26, the temporary agency at Shilo Camp, Man.,

NEW, BIGGER

This Grand Trunk Western R. R. rail motor car is powered by a "Cat" Diesel D17000 driving a 150-kw. generator.

Typical of hundreds of 44-tonners is this 380-hp. locomotive, powered by two "Caterpillar" Diesel D17000 Engines.



IF YOU are preparing to convert your gas-electric motor cars to Diesel, "Caterpillar" now offers the ideal power plant in its complete line of Railroad Diesel Engines, delivering up to 500 hp.

The same dependable type of engine that already powers 90% of all 44-ton locomotives on Class I, II and III railroads, as well as many rail motor cars and industrial locomotives, is now available for installations in locomotives requiring up to 2000 hp.

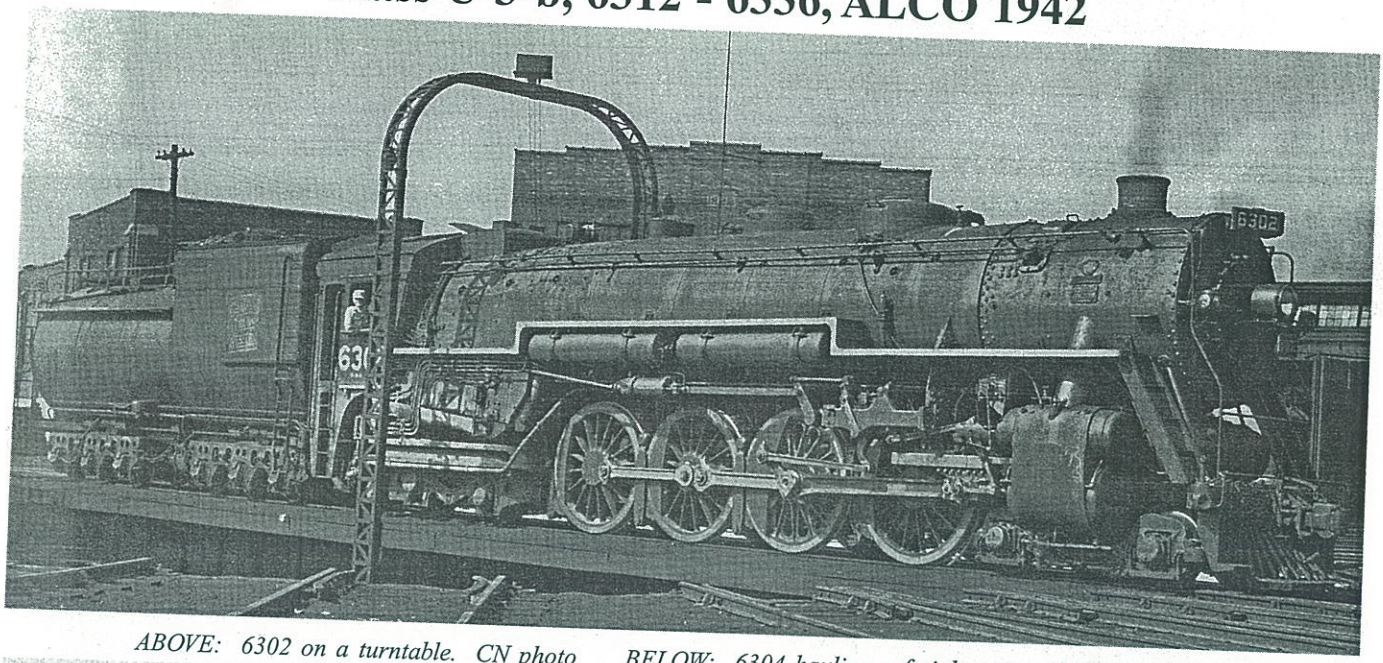
"Cat" Railroad Diesels are built in the world's most modern engine factory, where precision manufacture and close inspection are used to assure the finest product of its kind. Built to deliver steady power for maximum availability with a minimum of attention, these engines are designed to be maintained easily and economically without complicated equipment. "Caterpillar" dealers everywhere carry readily available stocks of replacement parts.

Send the coupon today for full information.

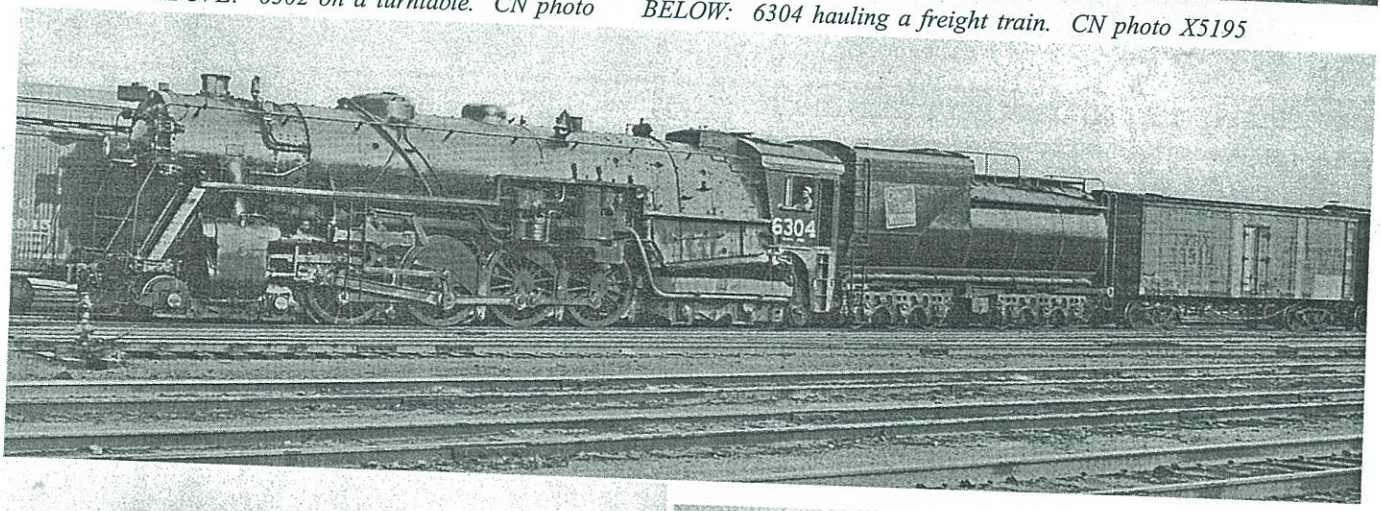
CATERPILLAR TRACTOR CO., PEORIA, ILL.

Nov 5 1949

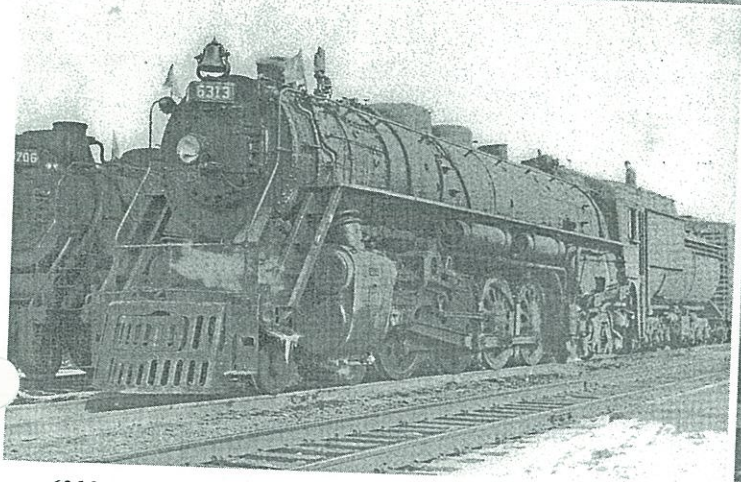
Grand Trunk Western Northern Type Locomotives
Class U-3-a, 6300 - 6311, ALCO 1927
Class U-3-b, 6312 - 6336, ALCO 1942



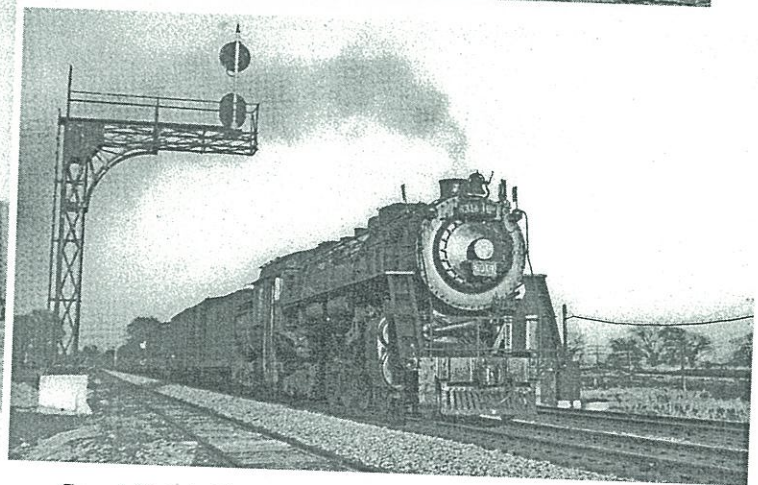
ABOVE: 6302 on a turntable. CN photo



BELOW: 6304 hauling a freight train. CN photo X5195



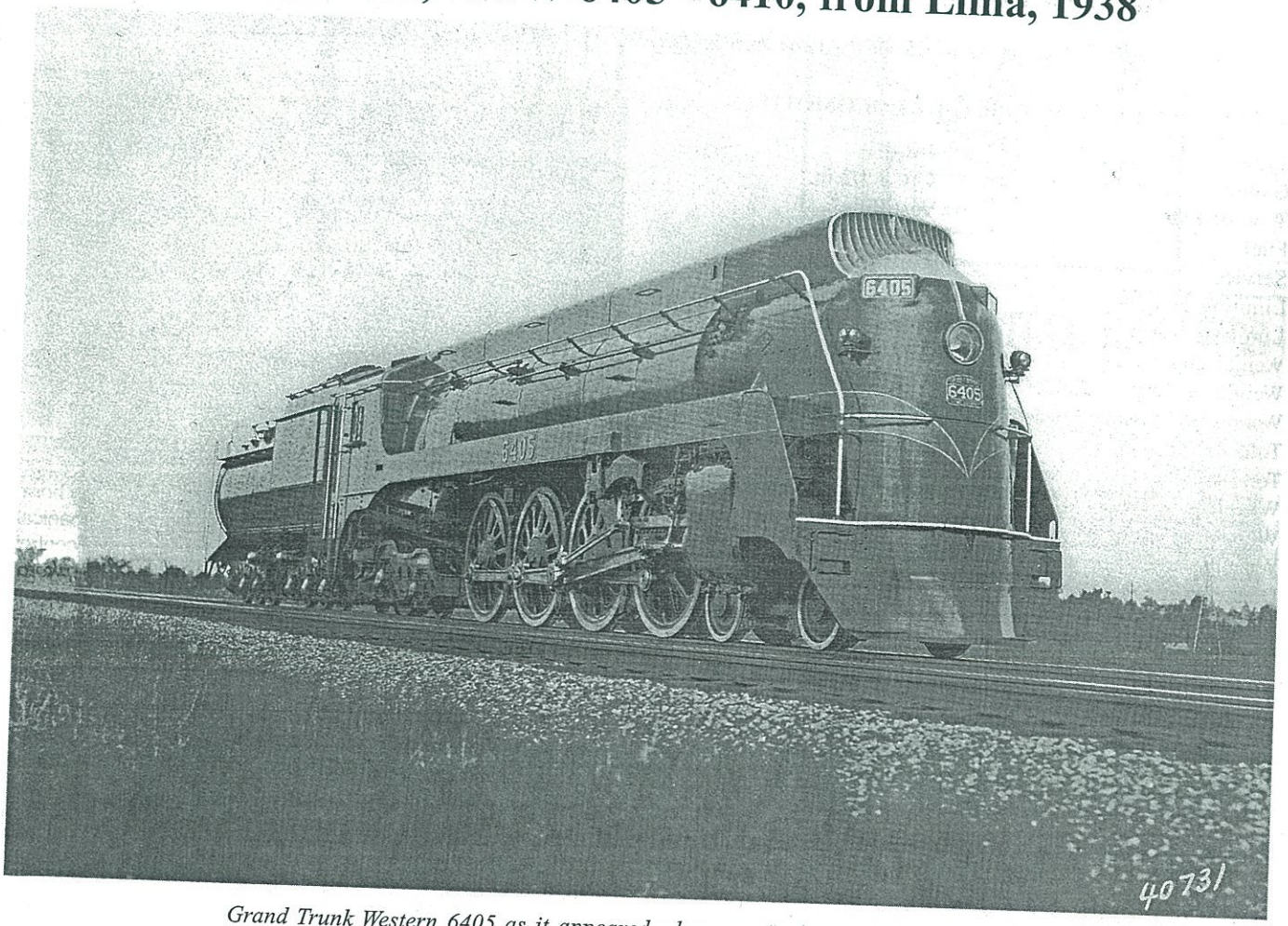
6313 on a westbound extra at Cornwall Ontario in 1949. CRHA Archives, Toohey Collection



Grand Trunk Western 6314 with a long freight, location unknown. CN photo X23519

Grand Trunk Western 6324 with a passenget train, passing through a busy yard. CN photo X23807

Class U-4-b, GTW 6405 - 6410, from Lima, 1938



Grand Trunk Western 6405 as it appeared when new in 1938. CN photo 40731

August 1942

TWENTY DIESEL SWITCHERS

By I. I. Sylvester

Chief Inspector of Diesel Equipment

Picture taken during inspection of new diesel-electric locomotives. From left to right:—L. H. McCagg, Diesel Supervisor, Central Region; R. S. Williams, Diesel Supervisor, Western Region; C. Lincoln, Electro-Motive Corporation, and I. I. Sylvester, Chief Inspector of Diesel Equipment.

THE Canadian National System, which has the distinction of being a pioneer in the application of diesel engines to railway traction, has again increased its fleet of diesel equipment. From October, 1941, until the end of January, 1942, it placed in service 20 new 1000-horsepower diesel-electric switching locomotives, on the Grand Trunk Western, the Central Vermont and C.N.R. lines.

Diesel switching locomotives are now manufactured in a variety of sizes and arrangements and this purchase was made from Montreal after a careful traffic and economic study and comparison with existing switching locomotives. The 1000-horsepower size was adopted as it permitted a very wide application and is more suitable for 24-hour-a-day assignment. Fifteen of these locomotives were supplied by the Electro-Motive Division of the General Motors Corporation in LaGrange, Illinois, and five were supplied by the American Locomotive Company and manufactured at its Schenectady plant. Both of these are similar in many respects and represent the latest and most improved design.

The general structure of the locomotives consists of a welded steel underframe mounted on cast-steel swivel trucks, a low narrow hood and an operator's cab at one end. The engine, radiator compartment, generator, auxiliary generator, air compressor and contactors are all located under the hood. The engine is in the centre section with the radiator compartment at the front. The windows in the cab are exceptionally large and there is a very narrow section between the windows. Visibility is further improved by an elevated operator's platform.

As weight is necessary to obtain high starting tractive effort, the locomotives are arranged so that the entire weight is carried on the driving wheels, and uniform torque is exerted by an electric motor on each driving axle. This represents the most effective return from the locomotive weight viewpoint. The diesel engine, which constitutes the prime mover, delivers full rated horsepower at all speeds, the power generated reaching the driving axles through electric transmission.

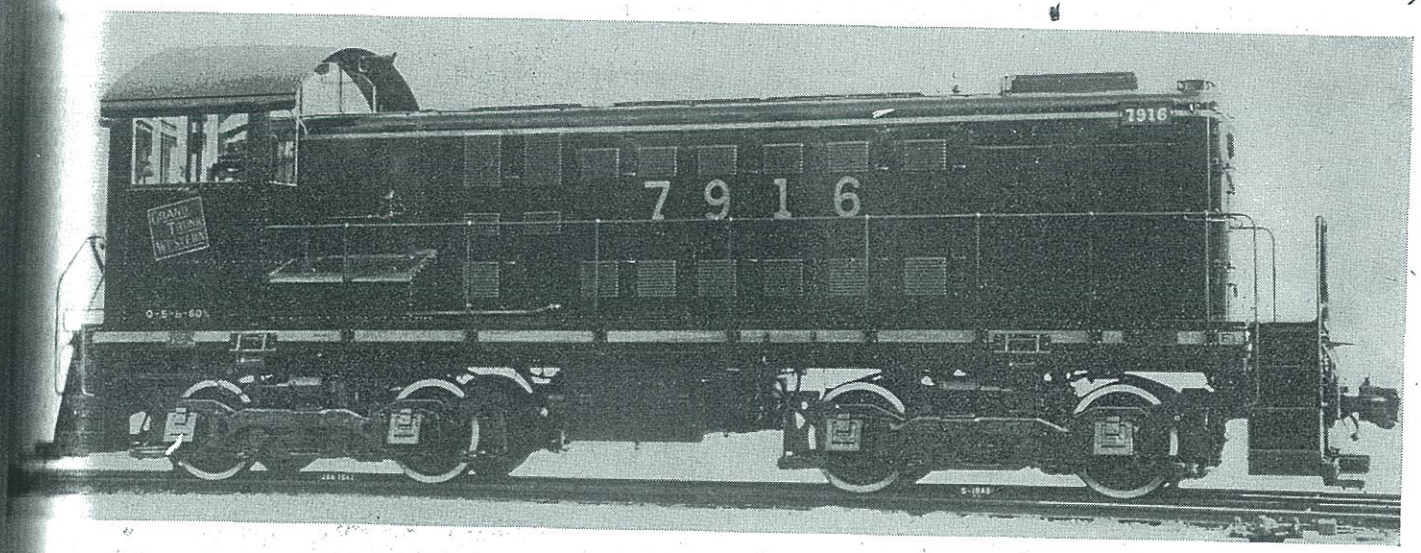
The assignment of these 20 new diesel-electric locomotives has released 29 steam switchers for other important work, and this is a tribute to some of the design features of the new locomotives. The swivel truck arrangement combines the flexibility of the small six-wheeled engine with the greater capacity of the eight-wheeled steam switcher, and permits a more complete service by being able to do the work of either class. Naturally this results in reducing the number of locomotives needed and also the locomotive hours required in the handling of [illegible] switching services.

Another advantage of these engi[illegible] which is common to all d[illegible] switchers, is that they can stay [illegible] the roundhouse almost continually [illegible] a month at a time, and attain a [illegible] high percentage of availability. [illegible] is due to the large quantities of [illegible] carried on the switcher and ease [illegible] which fueling operations can be [illegible] formed. There is no necessity to [illegible] work to take on water or clean fi[illegible] the daily and weekly inspections [illegible] many cases being made without [illegible] of time.

Detailed attention has been given [illegible] operator's comfort, with the realiza[illegible] that his efficiency can thereby be [illegible] creased. In addition to the excel[illegible] visibility afforded by the low hood [illegible] wide windows, the cab has been [illegible] oughly insulated for all-year [illegible] comfort and fan blown hot [illegible] heaters are provided for winter op[illegible] tion. The short rigid wheel base [illegible] swivel truck arrangement pro[illegible] very comfortable riding qualities [illegible] the operator, and as diesel handli[illegible] accomplished with very little phy[illegible] exertion, there is less fatigue [illegible] coupled with the absence of smoke [illegible] steam which frequently obscures [illegible] operator's view, makes for better [illegible] nal observance and greater safety.

Although the diesel engine in [illegible] locomotives supplied by the Ele[illegible] Motive Corporation is distinctly [illegible] ferent from the engine in the [illegible] motives supplied by the Amer[illegible] Locomotive Company, they are [illegible] rated at 1000 B.H.P.

The engine manufactured by [illegible] Electro-Motive Corporation opera[illegible] the two-stroke cycle principle [illegible] uniflow scavenging. Its 12 cyli[illegible] arranged in two banks of six, [illegible] 45° Vee, and have a 8½" bore an[illegible] stroke. Two high speed Roots [illegible] blowers built into the engine [illegible] driven by helical gear, supply [illegible] the cylinders. A large capacity [illegible] silencer is mounted on each [illegible]



The new 1000-horsepower diesel-electro switching locomotives have an overall length of more than 45 feet.

intake. The crankcase and cylinder decks are a steel composite structure, and large openings, fitted with covers, provide access for inspection of the working parts.

The crankshaft is a drop forging, drilled to provide lubrication for the bearings. Its 7½" diameter journals and 6½" diameter crankpins are hardened. The oil cooled pistons are of malleable iron and have four pressure rings and two scraper rings. The cast-iron liners in which they operate are double walled with cooling water space between, insuring proper port cooling and eliminating chances of fracture. Individual cast-iron cylinder heads are used. Each cylinder head is fitted with a patented General Motors fuel injector unit, comprising both pump and atomizer, thus avoiding long high pressure fuel lines. This injector is located centrally in the cylinder head. It is cam-operated through a rocker lever and the amount of fuel delivered and the time of injection is controlled by a rack and pinion operated from a common control shaft which is regulated by the governor.

Spiral gear pumps provide pressure lubrication and piston cooling. The engine operates at 266 R.P.M. idling and 800 R.P.M. at full speed.

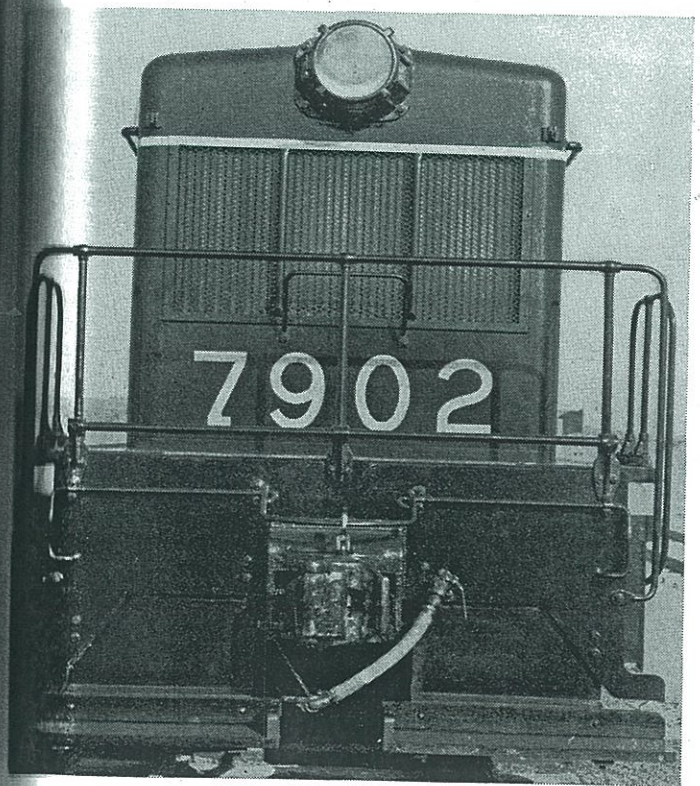
The engine manufactured by the American Locomotive Company's Diesel Division at Auburn, was developed on the basis of proven features of design and in perfect co-ordination with the GE electric drive.

It is a vertical six cylinder supercharged engine, operating on the four stroke cycle principle, having 12½" bore and 13" stroke. The supercharger operates on the Buchi System, driven from the engine's exhaust and automatically provides the correct amount of air at all times.

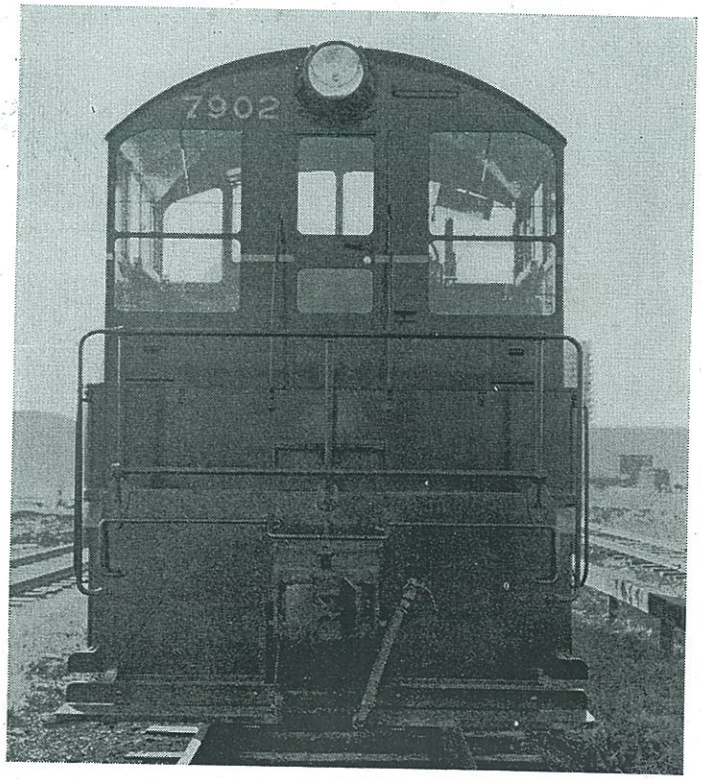
Cylinder block, cylinder liners and cylinder heads are cast-iron. The separate cylinder heads accommodate two intake valves, two exhaust valves and one injection nozzle, symmetrically arranged. All the valve operating

(*Continued on Page* 24)

Front view of locomotive showing width of hood and handrail arrangement.



Rear view of locomotive showing visibility obtained from operator's cab.



Twenty Diesel Switchers 1942

(Continued from Page 9)

gear is totally enclosed and pressure lubricated.

The individual fuel injection pumps for each cylinder are mounted on the engine. The injection is controlled by a Woodward hydraulic variable speed governor. A gear pump provides pressure lubrication, and oil for lubrication is retained in the engine base.

The engine operates at 250 R.P.M. idling speed and 740 R.P.M. full speed.

These locomotives are assigned as follows: four at Chicago, two at Pontiac, seven at Detroit, three at Battle Creek, one at St. Albans, one at White River Junction, one at Sarnia and one at Toronto.

The following table shows the principal dimensions and weights of the new equipment:—

	E.M.C.	ALCO
Model	1000 H.P.	1000 H.P.
Type	0-4-4-0	0-4-4-0
General Dimensions		
Track Gauge	4′ 8½″	4′ 8½″
Length over coupler pulling faces	44′ 5″	45′ 5¾″
Width over side sills	10′ 0″	10′ 0″
Maximum height above rails	14′ 6¼″	14′ 6″
Platform height above rail	4′ 8¾″	5′ 2″
Length of operator's cab	6′ 6″	6′ ¼″
Width of operator's cab	9′ 11½″	9′ 11″
Height of power plant hood roof above rail	11′ 9¼″	12′ 2½″
Width of power plant compartment	7′ 0″	5′ 7″
Wheel base truck	8′ 0″	8′ 0″
Truck centres	22′ 0″	22′ 6″
Number of drivers	4 Pairs	4 Pairs
Diameter of Drivers (Rolled steel)	40″	40″
Size of Journals	6½″ x 12″	7″ x 14″
Minimum Curve radius	75′	75′
Speed		
Maximum permissible speed	60 M.P.H.	60 M.P.H.
Weights		
Total weight fully loaded	246,700 lbs.	237,000 lbs.
Total weight light	239,300 lbs.	230,000 lbs.
Capacity		
Starting T.E. 25% Adhesion	60,000 lbs.	60,000 lbs.
Supplies—Approx.		
Fuel Oil	600 gals.	635 gals.
Cooling Water	195 gals.	240 gals.
Lubricating Oil	100 gals.	80 gals.
Sand	28 Cu. ft.	27 Cu. ft.
Electrical Equipment		
Generator	EMC Type D4	GE-GT 599A
Exciter	A3001	GE-GMG-10B A
Traction Motor	EMC D7C	GE 781
No. of traction motors	4	4
Gear Ratio		
Gear	62	75
Pinion	15	16
Battery		
Make	Exide	Exide
Type	MVAH 25	KT 11
No. of Cells	32	32
Air Brake		
Compressor Maker	GardnerDenver	Westinghouse
Type	W.X.E.	3 CD. built into engine
Capacity	178 C.F.P.M.	228 C.F.P.M.
Operating Brake Schedule	E.L. 14	E.L. 14

Canadian Medical Association Meet at Jasper

WITH an attendance of more than eight hundred, the 73rd annual meeting of the Canadian Medical Association at Jasper Park Lodge during the month of June, provided a scene of great activity at the picturesque summer resort in the Canadian Rockies. It was an historic meeting with delegates from all parts of Canada. The United States delegation was headed by Dr. Paul A. O'Leary, of the Mayo Clinic, Rochester, who conveyed the fraternal greetings of the American Medical Association.

One of the features of the meeting was the time devoted to discussions of problems related to medical work with the armed forces and in this connection a highlight was the attendance of medical men in the uniform of the Navy, Army and Air Force, including many senior ranking officers.

More than two hundred papers, covering every phase of medical work, were given and it is a matter of record that all general, sectional and round table discussion meetings were better attended this year than for many years. Among the most interesting of the gatherings were the special luncheons which were followed by very educational question periods.

Despite the busy and active program however, the delegates took time out for a little well deserved recreation. The men and ladies both had individual golf tournaments and riding was popular with all those who chose that form of exercise. Teas and luncheons featured the ladies' programs.

Dr. Gordon Fahrni, Winnipeg, relinquished his presidential jewel of office to Dr. A. E. Archer, Lamont, Alberta. Dr. D. Sclater Lewis, Montreal, is the president-elect. The official view was that this was one of the most great and valuable conventions of the Canadian Medical Association.

New Cars for Old

Oct 1935

By C. J. Hanratty

REHABILITATION on a large scale of certain types of freight equipment is now under way at the Port Huron, Michigan, car shops of the Grand Trunk Western, and the methods being employed for the reconditioning of steel hopper cars and box cars represent a distinct departure from accepted shop practices. Indeed in this particular program of modernization the Grand Trunk stands among the pioneers.

Efficiency in functioning and economy in cost have been achieved by organization of working processes. The manner in which these desirable objectives are being attained will be explained as this story unfolds.

To the layman in general, mechanical processes are sometimes mystifying. It is of great interest to watch the development of constructional work from the assembling of parts to the production of a complete unit. It is quite another matter for the non-technical mind to describe the processes. Fortunately, this narrator was guided through the shops and over the work by a thoroughly-trained technician who also possesses the happy gift of enthusiasm. The enthusiastic guide of that occasion was Harry G. Love, Superintendent of the Shops, and the greater part of the story that follows is told in the words of the man responsible for the operations at Port Huron.

"In the Freight Car Shops there are now three major work programs," said Mr. Love and these he explained as:

(1) Complete rehabilitation and modernization of 50-ton all-steel hopper cars;

(2) Rebuilding 40-ton steel underframe wooden superstructure box cars;

(3) Remodelling D.W. & P. flat cars into low side gondola cars.

Taking these programs in order, Mr. Love tells what is happening to the steel hoppers. "The original construction of these was conventional, using plates, angles and shapes riveted together and equipped with arch bar trucks. The rebuilt job is a car with pressed steel side panel sheets so constructed as to give equal, or more, strength than the flat plate. These sheets are electric welded, in fact it is a complete welding job in both underframe and superstructure. And the result? Well, the panel side sheets give larger cubic capacity and the car is lighter, the welded product being 1,600 to 1,700 pounds less in weight and providing probably 2,000 pounds additional freight capacity."

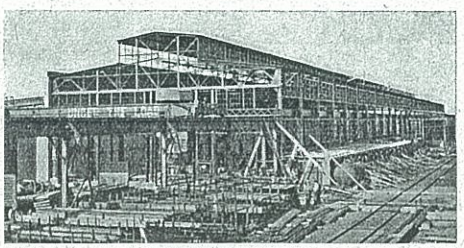
That's the sort of mystifying performance going on at Port Huron, they make a lighter car and it carries more, therefore, it should produce greater revenue. Here's what happens, as Mr. Love continues: "We have established something new in construction work, the use of a spot system. First, the old steel car is entirely cut down and the usable parts are moved to the second spot. The worn out materials are loaded into cars and shipped directly to the scrap dock at Battle Creek, thus saving unnecessary handling and the accumulation of materials. For the new construction all steel parts are placed underneath the overhead crane and are assembled and handled by the crane on to the car. These cars in course of construction then move to the workmen instead of the latter moving to the car, a time and labor-saving factor. The movements of the car on the assembly line are effected by the use of an electrically-operated hauler using a steel cable rove through a block, a system which eliminates the use of a switch engine to shift the cars. The panel side sheets are furnished by the Union Metal Products Company, being pressed and ready to apply by the welding process. After completion, the car is sand blasted and painted with a metal primer for protection against deterioration. Being open cars they are also protected in the interior with a coating of paint."

IT HAS probably struck the reader that all this sounds like the building of a new car, and, to all intents and purposes, a brand new car is produced; as Mr. Love suggests: "About all that is left of the old car is the number." As a matter of fact, the good useable material salvaged from the original and incorporated in the new hopper represents approximately $300 in value and the finished product has been obtained at a cost substantially lower than the cheapest equivalent offered by an outside car plant.

THE PICTURES:

Top: New modern section of shop at Port Huron with overhead crane, under construction; Harry G. Love, Supt. of Car Shops, Port Huron; Below, Modernized "aspiration" style headlining and decks with electrolier combination lighting and air grill units as part of air conditioning system on Grand Trunk Western dining cars.

Bottom, left to right: Rebuilt and modernized electric welded all-steel hopper car with cast steel truck sides and new "AB" brakes; new low side gondola cars for D. W. & P. Railway; a modernized 40-ton steel box car, A.R.A. specifications, "AB" brakes and universal modern safety hand brakes.



The second important program at Port Huron is the rebuilding of 40-ton steel underframe box cars. "These old cars," explains Mr. Love, "were built under Government control during 1919, at outside contract shops and at the time were of A.R.A. specifications. Now by removing the wood superstructure, applying steel sides, giving greater interior width and height, and replacing wood doors by steel ones, we are producing a modern box car of the latest A.R.A. specification in every respect. The box cars being rebuilt pass through a spot system similar to that used for the steel hopper cars. The old wood is removed at a location outside of the shop yards and the underframe is moved forward from station to station until the unit is completed. Modernized tools and machinery are being used. For the inside sheathing nails are driven home with air nailing machines, air saws cut boards, nuts are tightened by power nut tightening devices while portable cranes handle material directly to the job from the storage pile.

"STEEL doors are of the new A.R.A. design easy of operation and these and the steel sides are furnished by the Youngstown Door Corporation. The doors are bottom hung and are held in a positive position until it is desired to open or close. Then a lever is pressed, the door is cleared on its rollers and track and moves easily without the use of a bar, with a consequent saving of wear and tear on doors and car sides.

"Roofs for box cars furnished by the Hutchins Company are of the newest design of the outside metal type, affording full protection to the lading inside."

The reconditioned box car metamorphised into a smart-looking steel carrier also contains valuable salvaged material, in this instance averaging in value $1,800 for each unit and again bringing into service a superior car substantially lower in price than anything offered in today's market.

The third major item in the program deals with 110 D.W. & P. flat cars. These had served a useful life as logging cars and when remodelled into low side gondolas they are to find a new usefulness in handling shipments of crated automobiles for the export trade. Of special design, the full height to the top of the floor is less than in the conventional type, and this is an advantage in allowing greater loading height with safe tunnel clearance.

"This type of conversion," said Mr. Love, "takes into consideration the new A.R.A. draft gear to accommodate standard draft lug spacings and gives the car a strength equal to modern steel construction.

"In all these programs the prevailing type air brakes except the D.W. & P. program, are being replaced by the approved 'AB' type. The brake shaft and wheel makes way for safety hand brakes with cam arrangement which give to the new hand brake application power equal to that of the air brake, as required by present regulations.

"All arch bar trucks are being replaced by cast steel truck frames to comply with the new regulations."

So much for the reconditioning program. These shops have also been proceeding with a lot of work on general repairs to automobile cars, an important factor in Grand Trunk traffic. These cars have been receiving cast steel truck sides, new arch bars and the installation of the Evans loading device by means of which automobiles are suspended on specially designed racks and in cars so equipped the initial cost is soon offset by savings in the renewals of car floors so necessary when cleats are nailed to floors to hold the contents in place, a system which soon ruins the entire deck. Another great saving is effected by this loading device which does away with the necessity of blocking, crating and nailing, saving lumber and labor and producing economies for both shipper and railroad.

"In these automobile cars now going through the shops, door openings have been increased from 10′ to 12′ 6″ and these are all equipped with 'bottom hung' doors".

So far the story has been that of the freight equipment and that program is sufficient to provide work until the last day of December next, but these shops are capable of dealing with any form of work within the range of modern passenger requirements. For instance, in the Port Huron shops dining cars in use on the Grand Trunk Western for the international trains operating in and out of Chicago, received air-conditioning equipment and since these cars have been returned to service the chorus of praise from satisfied patrons grows day by day.

As Mr. Love explains: "Again we departed from the conventional and placed the air ducts through the overhead in the main dining room instead of constructing these ducts on the exterior of the side decks. The filtration and cooling system calls for an ice storage underneath the car. From the meltage of cake ice—usually 2,000 pounds—the cold water is pumped through the cooling unit located at the extreme end of the air duct. The fresh air and the recirculated air is cooled and

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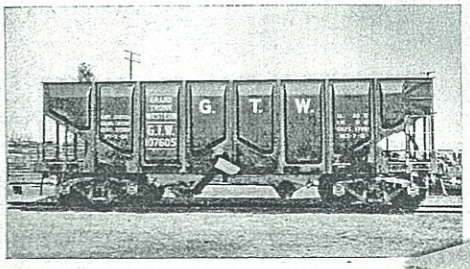
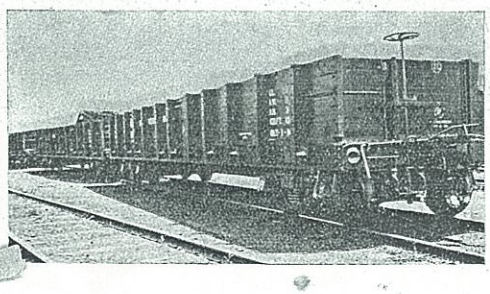
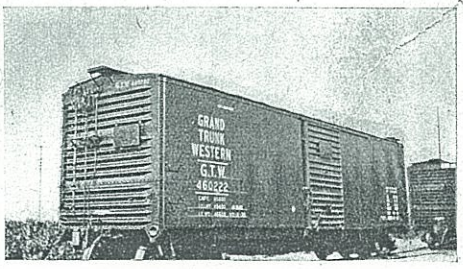






eg Association

meeting of the Winnipeg e Canadian National ation, the members stood ribute to the memory of r J. J. Best, who died time ago. Bro. Best e founder of the local most enthusiastic. Many e paid in short addresses s.

fe e of the meeting arance of A. Wilcox, t General Manager of gion. He is now living d gave the members a talk on his experiences n the early days in the events during the north-

ran on Visit

London, Ont., completed rvice with the company irement recently. Mr. itch tender and lampman ing his entire tenure of in the Old Country, he celebrated his retirement three-months' visit to Wales, and returned of the excellent service while crossing the ocean er Antonia.

Geachy Retires

ears of active railroad mpleted with the recent Neil McGeachy, Chief the Canadian National peg. On his retirement, y was presented with an folio containing currency, is associates' esteem. Neil rived in Winnipeg from 36, and worked on railway s far west as the Rockies. Northern Pacific Railway nen Canadian National Nor n Pacific properties, d chief engineer at the

hree Ownerships

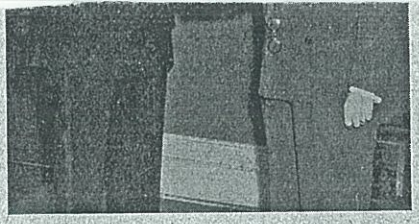
Noffke, better known to in Ottawa and vicinity as ho retired from active ly, started railroading on 889, under Foreman Logan, street yard, Ottawa. John calls, was then roadmaster, l was owned by the old ntic. At that time it was l rail and stub switches. locomotives were in use, ffke recalls many occasions men were picked up and the wood siding between nd Moose Creek to carry ail side. He helped change 56 to 72 pounds, and re- the old-fashioned winters snow was fought with ghs, which were worked

Mr. Noffke was made section l in October, 1905 when the ntic was taken over by the he was on the first section wa. In 1907, he was trans- nk st t yard, Ottawa, to of re truction, changing pound and laying new 80-lb. steel, Grand Trunk en the Canadian National ook over, Mr. Noffke re- ttaw complete his record co ous service on the nder three different owner- four superintendents and five Department of the railways, and recently Sergeant Willson was presented with one of the highest honors within the gift of the Royal Canadian Humane Society, the bronze medal for the saving of life.

The presentation was made by George A. Shea, Director of Investigation, who journeyed especially from Montreal for the occasion, in the presence of the various special representatives of the northern and southwestern Ontario district, and the constables of Mimico, where Sergeant Willson is stationed.

In his presentation address, Mr. Shea paid high tribute to Sergeant Willson's courage and quick action, and, on behalf of the National System expressed his appreciation of Mr. Harcourt bringing the matter to the railways' attention. In outlining the deed for which the medal was awarded, Mr. Shea stated that it occurred during the fall meet at the Long Branch race track. All traffic had been stopped upon the approach of a passenger train, when suddenly an elderly man stepped directly in front of the locomotive. The sergeant, who was on the opposite side of the track, made a running tackle and just threw the man to safety.

"I may say," added Mr. Shea, "that the name of the man whose life was saved is entirely unknown to us even now, and it speaks volumes for the modesty of Sergeant Willson, that he took the affair as part of the day's work and said nothing about it. But, fortunately, another did, and when the matter was reported to the proper authorities, a most careful investigation was made. How careful this investigation was may be known when I say that almost a year lapsed before the Royal Canadian Humane Association decided to award the medal. Mr. Harcourt was not the only one who witnessed the gallant action. Others also saw it and, although the identity of the man was never established, the evidence was so conclusive that the association considered the act worthy of high recognition."



Sergt. Willson and George A. Shea.

The gathering was presided over by R. Flynn, Superintendent of Investigation, who spoke highly of Sergeant Willson's services. Other brief addresses of felicitation were made by E. W. Jarvis, Assistant Director of Investigation, and W. M. Tisdale, formerly Superintendent of Investigation, who, although retired on pension, was present especially for the occasion.

Sergeant Willson has been identified with the Canadian National Investigation Department since 1921, and has been stationed in various cities and towns throughout the province. He was transferred to Mimico on January 1st, 1934.

different roadmasters.

On the eve of his retirement, Mr. Noffke was presented with a set of pipes and case from "the gang". James Strachan was spokesman, making the presentation and wishing Mr. Noffke long life and happiness.

A Stratford Alderman

W. B. Osborne, machinist, Stratford, who retired on pension recently, entered the service of the Grand Trunk Railways in March, 1893, at Stratford Shops, where he was employed until 1913, when he transferred to Transcona Shops, returning to Stratford, in July, 1916, where he completed his service of 42 years. Age 65 years.

He has served Stratford in many public offices, having been a member of the Parks' board for eight years—a member of the old age pension board for five years, and is at present completing his sixth year as city alderman.

Passed Half Century Mark

Fifty-four years of railroad service was terminated with the recent retirement of W. D. Todd, Island Pond, Vt., who finished his railroading as a passenger conductor operating between Portland, Me., and Montreal. Mr. Todd commenced his railroad career on September 26th, 1881, as a brakeman, between Portland and Gorham. He then moved to Island Pond, and was brakeman between that point and Gorham until 1890, when he became a freight conductor. Two years later, Mr. Todd was made a passenger conductor in 1902. Mr. Todd was born at Stanstead, Que., in July, 1859. All of his freight braking, he recalls, was with the hand brake and link and pin couplings and alarm line. He is a member of the Veterans' Association at Portland, and follows with keen interest developments on all parts of the System.

10/1935

New Cars For Old

(*Continued from page 5*)

cleaned and thus free of cinders and dust is distributed throughout the car from special ceiling fixtures which also house the lighting and make the interior both neat and attractive. Usual inlets are absent, or sealed, to prevent the entrance of foreign matter, the temperature is controlled thermostatically which allows for a range as wide as ten degrees below outside summer heat, which in Michigan, Indiana and Illinois, through which states these cars operate, generally means 80's and quite often climbs into the 90's. This particular system of air-conditioning is also applicable to heating and in the fall and winter months it will be used to direct clean, fresh, warm air through the diners."

Nor does that end the story of modernization going on at Port Huron. In these shops they equipped a suburban passenger coach with a new idea in fans to provide an economical method of air-conditioning. This is experimental but the preliminary tests suggest that the system may prove satisfactory.

"In the coach used for this experiment," said Mr. Love, "windows have been sealed to prevent the entrance of cinders and dust. Intake fans set in a box in the centre of the roof draw in filtered air and distribute it, producing a lower interior temperature without the use of refrigeration."

A great deal of work has been carried on in the open due to destruction by fire, on January 9th, of one entire section of the freight car shops. By the time this is being read a new shop will be in commission. This will be of steel frame 500 feet in length by 80 feet wide and an annex 29 feet by 160 feet. The main building will have an overhead crane.

ACROSS THE BORDER

By C. J. HANRATTY

Grand Trunk Western officials, especially those stationed at Detroit, have been greatly helpful in making better known the railway story to young people. There is being continued the programme inaugurated two years ago by which groups of boys and girls from schools and community centres receive special consideration in the planning of short journeys on the line, and in the inspection of passenger traffic facilities. It has frequently developed that in these excursions there are boys and girls of high school age who had never previously enjoyed a railway journey, many, indeed, were without any knowledge of the interior of passenger equipment. With the approval of C. G. Bowker, vice president and general manager, Grand Trunk Western, and the active participation of W. H. Edmondson, assistant to the vice president, numerous parties from schools in Detroit and the Detroit suburban area have been conducted through the terminal facilities and allowed full liberty to examine details of locomotives and passenger equipment. In this useful work real enthusiasm has been displayed by J. H. Cornwell, Coach Foreman at Detroit, who has been guide and demonstrator to each of the groups visiting the Detroit Terminal. The most recent visit was paid by a party of five adult instructors and 37 pupils of the Woodrow Wilson School of Ferndale. The latter is a pleasant residential community 10.89 miles from Detroit on the Detroit-Pontiac line. This group was shown through a 5200 Class Canadian National coach and initiated into the method of air-conditioning in use throughout the system. They next saw a parlor buffet car in use on the Grand Trunk Western in the Detroit-Muskegon-Grand Rapids service. These cars of the "Lake" series are particularly smart jobs and reflect great credit on the fine workmanship of the Port Huron shops. These cars contain built-in sections for the convenient service of luncheons and snacks provided from a compact buffet compartment. The individual seats have been comfortably upholstered, both in the parlor and smoking sections, and the interior has been decorated in light color of pleasing tone. They are, of course, air-conditioned.

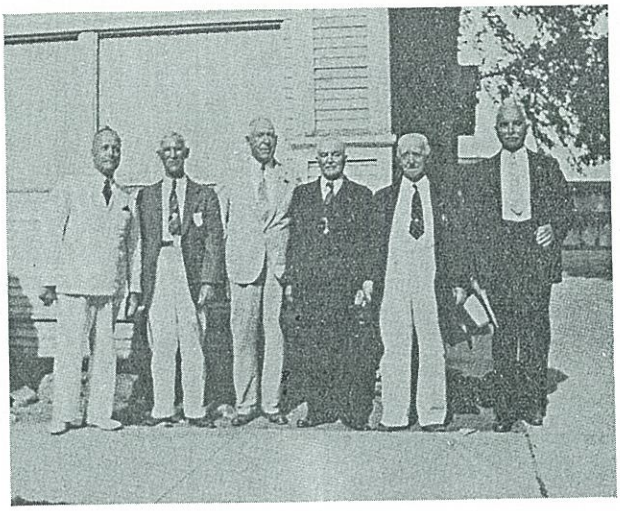
The pupils also visited an AC Pullman sleeper used in the Detroit-Toronto service and in the combination mail and baggage car learned how mail is dealt with in transit. To top off the visit there was an examination of the locomotive which was ready to go out on Train No. 19 operating from Detroit to Grand Rapids.

It is planned to continue visits of this character as long as the demand persists, and it is confidently believed that by this practical method the transportation education of a considerable section of youth will be widely extended.

Streamliner Whistle Travels Far

Streamline locomotives of the 6400 Class in use on the Grand Trunk Western between Chicago and Port Huron, Michigan, have now been established as prime favorites by young and old who live in the cities, towns and communities dotted along the 333 miles between these terminal points. Their size, manifest power and speed make them stand out in comparison with the previous types. These Grand Trunk 6400's—they number 6405 to 6410—have made themselves widely known in picture and story in the newspapers and technical magazines and to top off all that they have made themselves heard in Germany, Northern Ireland and goodness knows where else throughout the world. The term "heard" is not poetical license but quite solid fact.

Now for the explanation. Victor C. Watson, 781 Emmett Street, Battle Creek, Michigan, an amateur radio operator, has his station located 250 feet from where the main line of the Grand Trunk Western intersects Emmett Street. Recently, Mr. Watson had contacted station G5QX in Belfast, Ireland, operated by J. M. Smith, and later these two stations contacted station DJO in Berlin, Germany, in a three-way hookup. During this international conversation the Westbound "Inter City Limited," Conductor G. W. Earl and Engineer, H. M. Strickland, G.T.W. Locomotive No. 6408, heading into Battle Creek, sounded its regulation whistle for the crossing. Both foreign operators heard the whistle and asked questions and Mr. Watson explained that the "Inter City Limited" operates daily between Chicago-Toronto-Montreal and he also explained that the "International Limited" is now in its 39th year of continuous service between these cities. Being a machinist and radio repairman, Mr. Watson was also enabled to explain that the steam whistles on the 6400 streamliners are actuated by air. He has been operating an amateur station since 1913 broadcasting on the 20-metre and 160-metre bands using from 360 to 1,000 watts.



PORT HURON VETERANS' OUTING

Members of the picnic committee of the Port Huron, Michigan, Grand Trunk Western Veterans' Association responsible for the excellent arrangements at the annual outing. From left to right: Walter D. Hall, former superintendent Port Huron terminal; Martin P. Brophy, M. Cashman, chairman of the committee; William A. Morden, president of the association; E. M. Utting, secretary and treasurer; Theodore Neubauer, vice-president.

This Golf is Neighborly

Following a custom of some years standing, the recreation units of the Grand Trunk Western Recreation Association this season completed a golf-tournament with the boys from Battle Creek landing in top place and in possession of the Thornton Trophy until 1939, or as long thereafter as they possess sufficient skill to maintain the prize. The contest has been divided in two parts played in the late Spring and early Autumn, a method most satisfactory in allowing the greatest possible number of players to participate. At first reading, it may not appear important that groups of young men—and some not quite so young—employed on the Grand Trunk Western should have the opportunity of disporting themselves on golf courses during two days in the summer season. Nevertheless, there does lie within such contests a degree of importance appreciated by the management which has given encouragement to the maintenance of these and other forms of friendly competition amongst units of the Recreation Association. The Grand Trunk Western is a compact system and its lines between Chicago and Port Huron and between Muskegon, Grand Rapids and Detroit, serve important communities each readily accessible to the others. In each of the communities represented in the golf tournament, South Bend, Battle Creek, Grand Rapids, Pontiac, Detroit, Port Huron and Chicago, the Grand Trunk-Canadian National Railways furnish a large and vital part of the rail communications carrying great quantities of raw material and finished products. In each city there is a representative force of employees engaged in various activities, operations, maintenance, communications and solicitation, both freight and passenger. In large organizations men in departments are apt to segregate themselves in watertight compartments and to believe that while their own particular work is important, that of the other fellows' has but scant value. These inter-city competitions, both golf and bowling, have had the effect of bringing together men from many departments and branches of the company's activities executive, offices, right-of-way, shops and the numerous places where men must work to maintain the operation of a busy railroad. As a result of such meetings, both summer and winter, men have made acquaintanceships and friendships with their fellows engaged in other company work, thus learning something of other activities and their importance in the general scheme of things. This has made for friendliness and neighborly feeling and has served to deepen the spirit of genuine co-operation so valuable in a big railway family.

Detroit Railway Women's Outing

Detroit, Michigan—The Labor Day week-end is a very special occasion to members of the Railway Business Women's Association of Detroit. It's the date for their annual outing, which this year took them to Washington, D.C., for sightseeing trips in the Capitol City and to nearby points of interest. The Grand Trunk Western and the Detroit & Toledo Line Railroads were well represented in the group of fifty members of this Association who boarded special Pullmans at 5:15 P.M. Saturday, September third, and journeyed to Washington via Pere Marquette and Baltimore and Ohio Railroads. Sunday and Monday were occupied with trips, including one to Alexandria, Va., and Mount Vernon, as well as visits to the historical monuments and Federal buildings. The party left Washington late Monday afternoon and arrived back in Detroit Tuesday morning.

Miss Charlotte Lubs, a past president of the Association made the arrangements for the outing, which has been an annual event on the group's calendar for about ten years.

Presentation to Captain Connolly

Elsdon (Chicago)—Captain William Connolly of the Grand Trunk Western Department of investigation, recently promoted in a transfer to South Bend, Indiana, was the recipient of a memento from fellow members of the Department who subscribed for a handsome Illinois wrist watch which is now proudly sported by Captain Connolly. The actual presentation was made by Hugo Brandes, Superintendent of Investigation, who came from Detroit to assist at the social gathering. Amongst other officers of the department who aided in the presentation were Inspector Day and Sergeants Novak and Marquess.

G. O. Thoresen for St. Louis

G. O. THORESEN
ST. LOUIS, MO.

St. Louis, Mo.—Following the retirement of W. H. Burke from the responsible position of General Agent, Freight Department, St. Louis, after fifty years of service with the Grand Trunk-Canadian National Railways, the appointment of G. O. Thoresen to the position vacated by Mr. Burke was announced by E. F. Flinn, Freight Traffic Manager, Chicago. Mr. Thoresen had held the position of General Agent at Detroit for nearly seven years previous to this promotion.

George Oscar Thoresen was born in Chicago, Illinois, July 16, 1896 and after schooling in that city joined the traffic department of the Grand Trunk in Chicago on August 17, 1911 as a messenger. Advancing through a clerkship to soliciting freight agent Mr. Thoresen joined up with the military forces of the United States during participation in the World War and rejoined the Grand Trunk as traffic representative on March 1, 1919. During the years that followed Mr. Thoresen occupied various posts in the freight traffic department and in the "Cat" Line (The Canada Atlantic Transit Company), the system lake service between Depot Harbor, Milwaukee and Chicago. In November, 1930 he became assistant to the Freight Traffic Manager and on January 1, 1931 was appointed General Agent at Detroit, Michigan, which position he maintained until his promotion to St. Louis, Mo., on October 3, 1938.

Soon after his retirement, Mr. W. H. Burke succumbed to a heart malady which had afflicted him just previous to his leaving his post in St. Louis.

Battle Creek Takes Golf Trophy

South Bend, Indiana—The second part of the 1938 golf tournament for the Thornton Trophy which represents the inter-city championship of

(*Continued on Page* 28)

Sept 1929

Even Bridges Tell History

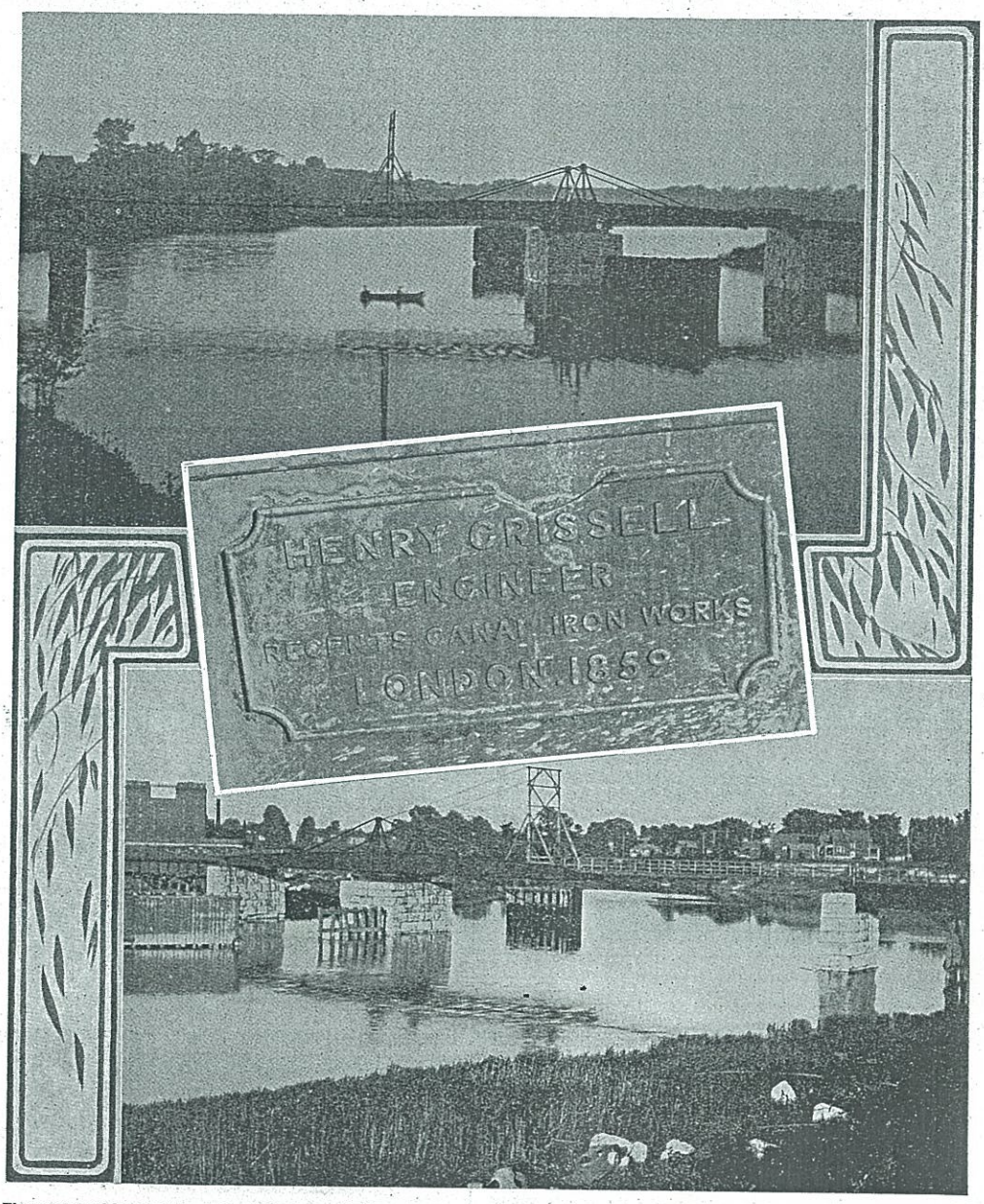
Old Port Huron Link to Be Dismantled but Preserved As Reminder of Past—News of the Grand Trunk Western Lines

THE dismantling of the old iron bridge across Black River at Fifteenth Street, Port Huron, to be replaced by a new modern bascule type bridge, marks the passing of one of the oldest railroad bridge structures in the country, and particularly in Michigan. This bridge was constructed in 1859 and fabricated in London, England, by the Regent's Canal Iron Works Company Ltd. The company ceased to exist in 1891 and its property is now occupied by a firm of granite merchants.

The old English iron, soft and ductile, shows no signs of deterioration and the purity of the iron accounts for the lack of rust. A new bridge is necessary only on account of the greatly increased weight of locomotives and equipment existing today. Three miles of railroad on either side of the bridge, between Fort Gratiot and Tappan Junction, will be reconstructed with heavier steel and new ties. These improvements will facilitate switching service of the railroad to the many industrial plants and business houses on the north side of the city and will eliminate the long haul now necessary from the Grand Trunk yards at Tappan, through the city, and over the Pere Marquette bridge.

The new bridge now under construction at Cleveland, is expected to be completed by October. It will be entirely electrically operated and provide an eighty foot clear channel width. It will have a single leaf rolling lift span of 100 feet with 23 foot fixed girder span and an approach span on each side. The approach spans are to be 79 foot deck plate girders. The steel used in the new structure, it is estimated, will weigh 310 tons, and the concrete overhead suspended counterweight is estimated to weigh 280 tons.

The sub-structure of the old bridge consists of two large stone abutments and four stone piers. The superstructure is made up of two deck plate girder spans of 67 feet, and one through plate girder swing span of 122 feet. It carries a single track and weighs 179 tons. The Company intends to preserve the old structure as a relic of pioneer days of the railroad in Michigan.



The upper and lower pictures show the pioneer bridge at Port Huron, Mich., one of first railway projects put through the State by the Grand Trunk Railway, and now to be replaced. Inset in centre is a plate on span, which gives an idea of its antiquity. It was built in London, England, and is still serviceable.

head of the St. Clair River with a Michigan road, to open up a new western country in which Michigan was included. The location at the head of the St. Clair River, offered the most direct route from the Atlantic states to Wisconsin, and the mineral region of the west. The passage across the river at this point provided the most

bridge across Black River was the biggest project in putting the line through, as Black River was the only navigable stream which the road could cross. This road was built under the charter of the Chicago, Detroit and Canada Junction Railroad. The first car ferry to transport cars across the river was a wooden boat, the *Huron*. With no means of propulsion, it was anchored by cable in midstream and handled by a small tug, called the *W. J. Spicer*, the car ferry being allowed to swing on the cable from shore to shore somewhat like a pendulum. Later, a steam car ferry, the *International*, was brought up from Lake Erie and placed in service.

During this early period, many railroads were built on paper only and the Grand Trunk was one of the few actually constructed in Michigan. In 1847, the legislature chartered the Port Huron and Lake Michigan, but no construction was started until 1865, when W. L. Bancroft, a local banker and lumber dealer, became interested in the local railroad situation. He bought up all the rights of the P. H. & L. M. Ry., and the Port Huron and Milwaukee Ry., and united them. With the same object in view, as was anticipated by the promoters of the Huron Land Company, construction was started across the state to Lake Michigan. The road reached Flint in 1871. It was finally taken over by the Grand Trunk Railway, and, together with other short roads, was completed to Chicago, and became the Grand Trunk Western Railroad.

Port Huron wins the baseball championship of the Western Lines again this year, making the third time that this honor has been won since the organization of the Inter-City league on the Western Lines, in 1924. Port Huron topped the League in 1926 and 1927. Detroit, the defending champions, are in fourth place at present with a postponed game pending with Durand. Durand is reposing safely in second place. Battle Creek is riding in third place with Chicago trailing the league.

The league this season afforded considerable interest with some very close games deciding the

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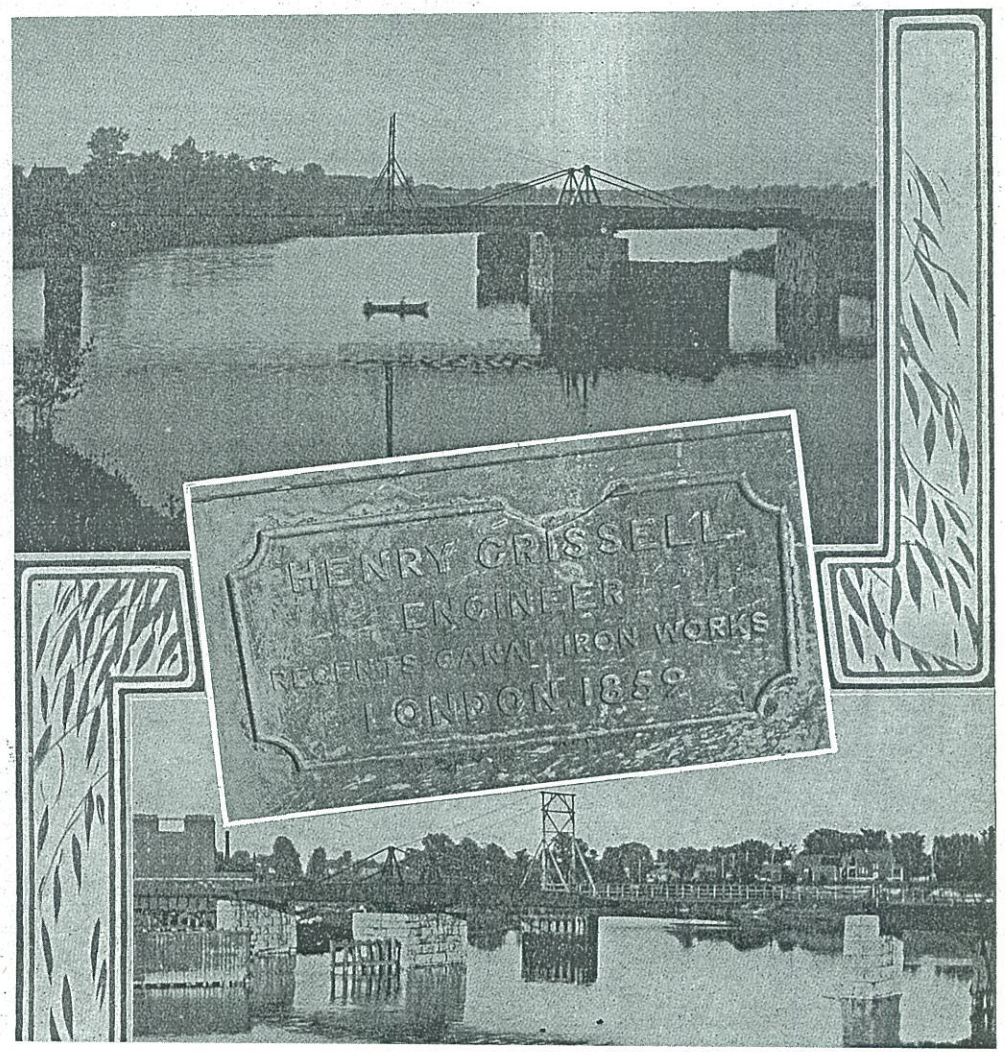

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Field pastor of the
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said that all men would indeed be fortunate if at the end of long service they could possess such a large circle of friends.

In returning thanks to the speakers Mr. Hall said that he had preached courtesy and friendly co-operation and was satisfied that the principle had been well established and was, indeed, exemplified by the presence of such a large gathering.

The speeches were terse and numerous and all paid tribute to the fine work done by Mr. Hall. In particular, Mr. Chown enumerated a list of inventions and improvements in electrical and mechanical appliances for which Mr. Hall had been responsible, an impressive list of useful work.

The table of honor was set out by an imposing model of a Grand Trunk Western Locomotive heading a varied set

Let's go fishing, said someone in the Freight Department. Spring was in the air, reports were favorable and the suggestion took root and prospered. Accordingly, an outing was arranged by the staff of the Grand Trunk-Canadian National freight soliciting offices of Minneapolis and St. Paul, invitations were issued which were promptly accepted by eighteen patrons of the company and the final notation in the record was to the effect that fish were plentiful and everybody had a good time. The party was held at Big Sandy Lake in Aitkin County, Minnesota, an area well known for its fishing waters and if you must know the date, well it was in the month of May. Those in attendance were Connie Winters, H. Hammes, Minnesota Valley Canning Co., LeSuer, Minn., Harry Sass, Geo. A. Hormel & Co., Austin, Minn., Harold LaCroix, John Leslie Paper Co., George Luck and Chet Wickstrom, Washburn Crosby Co., James Peeke, Northrup King & Co., Frances Sheets, Cannon Valley Manufacturing Co., Jas. Dunn, Scott Pole and Treating Co., Bob Schimel, Farm Service Stores, and Emery Finckh, the faithful chef, all of Minneapolis; Jack Shonka, Minneapolis-Moline Power Imp. Co., Hopkins, Minn., Gene Burke, Superior Packing Co., Ed. Ryberg, Hamm Brewing Co., Ed. Bordenave, Twin City Wholesale Grocers, Bob Edberg, Minnesota Mining and Mfg. Co., Mark Pike, Worch Cigar Co., J. V. Johnson, Gordon Ferguson Co., Lou Rapp, Farwell Ozmun Kirk Co., Les Newell, D.L. & W., all of St. Paul. The Grand Trunk-Canadian National family representatives included Laurie Freeman, Chief Clerk, Detroit; Charlie Block, Paymaster, Detroit; R. M. Stubbs, General Agent, Minneapolis; Paul Hankey and Art. Strapp, travelling freight agents, Minneapolis; A. R. Menning, General Agent, St. Paul, and Paul Fye, traffic representative, St. Paul.

"Lines busy" when St. Paul freight men go fishing.

MUSKEGON FACILITIES

On January 15, 1937, agreements between the Grand Trunk Western R.R. and Pennsylvania R.R. became effective following approval by the Interstate Commerce Commission, under which the facilities of the two railroads in the cities of Muskegon and Muskegon Heights, Michigan, are now being used in common. Likewise the Grand Trunk's yard and facilities at Milwaukee, Wis., and the Lake Michigan car ferries operating between Muskegon and Milwaukee are being used jointly.

Under this arrangement the Pennsylvania R.R. is enabled to enter Milwaukee, Wis., as a trunk line railroad and interchange at that point business between the east and northwest states instead of handling such traffic through the Chicago terminals. By use of this new route, the Pennsylvania R.R. saves a rail distance between Fort Wayne, Ind., located on its main line, and Milwaukee of 46 miles but including the voyage across Lake Michigan the distance actually traversed is 38 miles greater than the all-rail route. Since interchange is eliminated in the Chicago switching district, however, that company is able to effect a saving of approximately 24 hours on the movement of traffic between New York and the East and Milwaukee and points beyond.

The Grand Trunk Western has four car ferries available for operation on Lake Michigan which are capable of providing the equivalent of six round trips across the lake in 24 hours, or sufficient to handle a maximum of 105,000 cars annually. Use by the Pennsylvania R.R. of surplus capacity of the car ferries will result in a considerable annual saving to the Grand Trunk Western inasmuch as the expense of operation will be divided between the railroads on the basis of the number of cars handled by each company.

At Milwaukee the Grand Trunk Western has a yard containing 5.34 miles of track, two car ferry slips, a freight warehouse for the handling of l.c.l. business, an enginehouse, and similar facilities. The yard is operated with a 75-ton gas-electric switching locomotive. Direct connections for interchange are made with the Chicago & North Western and Chicago, Milwaukee, St. Paul & Pacific Railroads.

The belt line of the Muskegon Railway & Navigation Co., owned by the Grand Trunk Western, is used in part in the joint operation in the Muskegon District, including its yard and engine terminal facilities. The Pennsylvania R.R. has 36 industries on its tracks and the Grand Trunk Western 19 in this zone which under the joint arrangement have the benefit of service by either railroad without any delay for interchange switching. The Pennsylvania R.R. passenger trains now use the Grand Trunk Western's passenger station at Muskegon.

ments was composed of Albert G. Thernstrom, general chairman; Russell L. Gibbs, Louis F. Grass and John Laudeman, of Port Huron; R. J. Bryant, W. E. Germain and C. T. Thorley, of Sarnia; and J. H. Stuart, of Point Edward.

Mr. Hall on retirement had completed 47 years of service. He was born in London, England, May 20th, 1871, and after his preliminary education studied electrical engineering under Prof. Sligo and then acquired practical experience. After coming to this side of the world, Mr. Hall obtained employment as an electrician at St. Clair tunnel in October, 1889, during the period of construction. Afterwards the scope of his work extended as electrician of the tunnel with supervision over electrical work on the then Chicago and Grand Trunk Railway and its subsidiary lines. In January, 1903, he was appointed Electrical Engineer for the Grand Trunk System with headquarters at Montreal. For a period Mr. Hall's services were loaned to the Canada Car and Foundry Company as Master Mechanic and Electrical Engineer and on his return to the Grand Trunk service in November, 1907, he was appointed superintendent of the St. Clair Tunnel with headquarters at Port Huron in charge of power plant, pumphouses, tunnel equipment and light and power for the Port Huron and Sarnia Terminals.

Like all railroad men, on retirement Mr. Hall plans to travel.

Appointments

Changes in the Freight Traffic Department affecting lines West of Detroit and the St. Clair Rivers are announced by R. F. Clark, assistant general agent, Chicago, and approved by E. F. Flinn, freight traffic manager, Chicago, as follows:

C. J. Piper, general agent at Kansas City, Mo., promoted to the position of general agent at San Francisco, succeeding the late Mr. Logan;

G. W. Amey, general agent, Omaha, promoted to the position of general agent, Kansas City, Mo., succeeding Mr. Piper;

A. R. Menning, general agent St. Paul, Minn., promoted to the position of general agent, Omaha, succeeding Mr. Amey;

C. W. Nelson, Freight traffic representative, San Francisco, promoted to position of general agent at St. Paul, Minn., succeeding Mr. Menning.

Mr. Piper, a native of Summer, Wisconsin, entered the service as ticket agent at Virginia, Minn., July 18, 1913. He was transferred to the traffic department at Duluth, December 1, 1916. He later became commercial agent, then general agent at Minneapolis and on April 1, 1935, became general agent at Kansas City.

Mr. Amey, a native of Napanee, Ontario, entered the service as a clerk in the transportation department at Chicago, April 24, 1911. In August, 1922, he transferred to the traffic department, and on November 1, 1932, was appointed general agent at Omaha, Nebraska.

Mr. Menning, a native of Omaha, Neb., first became a clerk in the office of the commercial agent at Minneapolis, May 1, 1914. He later became a travelling freight agent and on April 1, 1935, was appointed general agent at St. Paul, Minn. The present promotion returns Mr. Menning to his native city.

Mr. Nelson was born at Cleveland, Ohio, and entered the service as chief clerk in the freight department at Calgary, Alberta, November 25, 1918. He was transferred as clerk-solicitor to San Francisco, October 31, 1922.

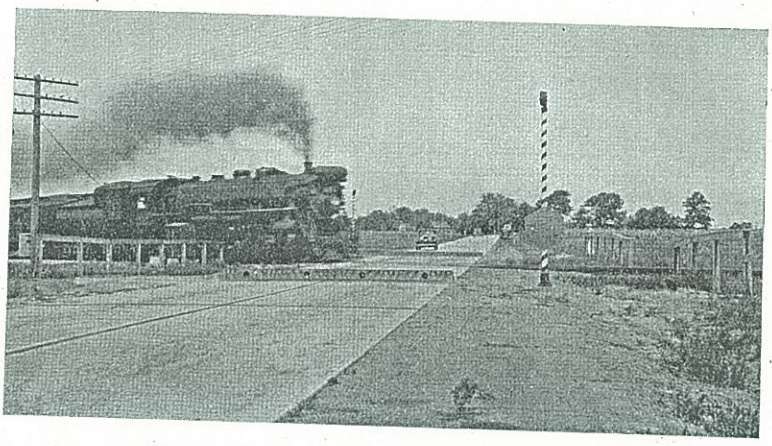
This Surely Means "Stop"

A NEW type of highway crossing protection, consisting of barriers which rise up in the highway, 50 ft. from the railroad track, has been installed at the crossing of Indiana State highway No. 130 with the single-track main line of the Grand Trunk Western about two miles west of Valparaiso, Ind. As this is a new state highway, one of heavy traffic, some type of protection was required and, therefore, with the approval of the State Highway Department, the Indiana Public Service Commission issued an order requiring the installation of highway barriers. The equipment, known as the "Autostop", is similar to a set of barriers which has been under test on the Grand Trunk near Detroit since November, 1932. The main line of the Grand Trunk is double track except for a five-mile section of single track between Valparaiso and Sedley, in which is located this highway crossing. The traffic includes 6 passenger trains and 10 to 15 freight trains daily. A count of the traffic on the highway during August, showed an average of 400 trucks and 1,100 passenger automobiles on week days and 200 trucks and 1,800 automobiles on Sundays.

THE barrier installation was placed in service on August 8. It consists of two barriers, one on each side of the railroad, which rise when a train approaches. Each is operated by an electric motor controlled automatically by track circuits, the same as for flashing-light signals. When a train enters the control section, the warning bell starts to ring and each barrier rises to a height of 4 inches, stopping at this point for a period of 10 seconds, during which time four flashing red lights and five button-like reflector STOP signs are displayed on this section of each barrier. In case an automobile, approaching from either direction, strikes the device during this period, the barrier is depressed to the level of the pavement by the wheels of the vehicle and the car rides over without harm to the device or to the vehicle. When the 10-second period has elapsed, the barrier rises to its full height of 10 inches, the surface curved to approximate that of the wheels of an automobile being presented on the approach side, as shown in the illustration. If an automobile happens to be on the track side of the barrier when the device is at full height, the front wheels of the car ride up on the sloping face of the track side, pushing the barrier down to the level of the highway so that the car can ride over it, after which the barrier rises again by spring action. Conversely, if an automobile travelling toward the track, strikes the barrier when in the raised position, the front wheels strike the curved surface, the tires acting as a cushion to throw the car and throw it backward and upward, thus checking approach to the crossing. It is said that a five-passenger sedan, weighing 4,000 lbs., with passengers weighing 900 lbs., has been driven against the barrier at a speed of 30 m.p.h. with no injury to the passengers or the car.

The track circuits for the control of the protection provide for the warning starting 30 seconds before the arrival of the fastest passenger train, and for the barrier to be at the fully raised position 15 seconds before the train arrives. The barrier remains in the fully raised position until the rear of the train clears the crossing, the bell continuing to ring and the lights continuing to flash. As soon as the train passes, the bell ceases to ring and the barrier starts to lower, the lights continuing to flash until the barrier is down. About five seconds is required to lower the barrier.

THE entire device is located below the surface of the pavement, and is housed in a framework consisting of two steel beams 18 inches high, set 16½ inches apart.



The barrier is fully raised 15 seconds before train arrives. —Photos by Railway Age.

Cross members and braces are welded in place, the frame being open at the top and bottom. The barrier itself—the part that rises above the level of the highway—is constructed in sections 10 feet long, each of which extends half way across the highway. Each section is hinged to swing upward, as shown in the illustration, the movable sections being counterbalanced by helical springs, power being used to operate the device both up and down. The worm gear which moves the operating rod in and out is driven through a gear reduction by a ½-hp. 32-volt General Electric d-c motor, which operates at 1,725 r.p.m.

An interlocking relay at the crossing, controlled indirectly by the track circuits, controls secondary relays which in turn control the panels located in the pits at the ends of the barriers. The signal relays, flasher relays, rectifiers and transformer power-off relays were furnished by the Union Switch & Signal Co.

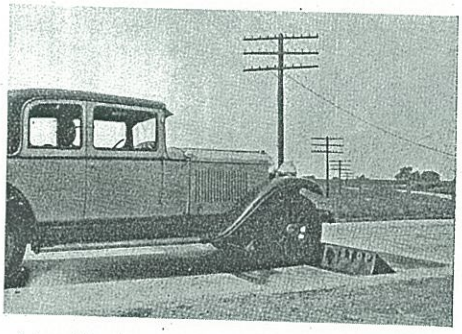
The power supply to the secondary control circuits on the panels and to the operating motors consists of a 16-cell Exide Type-EMGO-8 lead storage battery which is located in the battery compartment of the instrument house. This battery is on a floating charge through a rectifier which operates from the 110-volt a-c line. With this arrangement of power supply, the operation of the Autostop is not dependent upon the continuity of the a-c line.

At the right of the highway and opposite each barrier is a mast on which is mounted a warning bell which operates from the time an approaching train enters the control section until the rear of the train passes the crossing. Also mounted on this mast is a 30-inch hexagonal sign with the words "Automatic Barrier" and an arrow pointing to the barrier, in reflector buttons on a yellow background. Mounted at the right of the highway approaching the crossing from each direction are certain signs at different distances from the crossing. All of these signs are in black letters on a yellow background, and the letters are fitted with reflector buttons. At a distance of 800 feet from the crossing there is a 24-inch sign with 7-inch letters reading "Slow Down".

At 400 feet there is a sign reading "Expect Quick Stop", the first word being in 6-inch letters and the remainder in 7-inch letters. At the 350-foot point, there is a standard "RR" approach warning sign, which is installed to comply with the law. At the 200-foot point there is a standard highway "SLOW" sign.

A check of operations since the installation was placed in service shows that an automobile runs over a barrier in the hesitation position about once each week, but that no car or truck has failed to stop short of the barrier when it was in the fully-raised position.

The Autostop barrier, manufactured by the Evans Products Company, Detroit, Mich., was installed under the jurisdiction of P. D. Fitzpatrick, chief engineer of the Grand Trunk Western railroad, and under the supervision of W. L. Dayton, superintendent of signals, the signalling control and power supply equipment being installed by signal department forces.



Automobile tires strike curved surface of the barrier.

Snow-bound Christmas

By F. R. SAYER

DID I ever tell you about the time we spent Christmas on the main line with a trainload of passengers on behind?" asked the veteran eagle-eye, blowing clouds of smoke from his pipe as he sat with feet propped up against the west-house stove.

That was back in 188- — when I was firing one of the old four-wheelers on the northern division of the Transcolonial.

We left the terminal on December 23rd, with all hands looking forward to Christmas festivities at home. Everything of the terminal on one of those perfect days, clear and frosty and the stars twinkling overhead. Plenty of steam, a plentiful supply of coal and water in the tender.

But we had not gone very far when the sky changed. Masses of dark clouds loomed up and blotted out the sun completely. The wind began to rise and before long we were in the thick of a small-sized gale. With the wind came snow, large flakes at first, then smaller ones which usually means plenty of snow.

"Old Jim, the driver, was one of the best on the division, bless his soul. He was nursing the old girl, getting all he could out of her and she was doing a first-rate job. She labored heavily but managed to break through the drifts which piled on the right of way. All around us was virgin forest.

"At dawn we were still miles from nowhere when the old engine plunged her nose into a huge drift and died.

" 'Well, here we are. Did you bring your Christmas presents with you?' " said old Jim, at the throttle—I can still see him looking over at me in the cold morning light." 'Nope', says I,'and it does not look as though I'm going to get any, not on Christmas day, anyway.'

"Well, all that day before Christmas, there was no sign of the storm letting up. The passengers back in the coaches had those old pot-bellied coal stoves and a good supply of fuel in each car, so they were fairly comfortable.

"Day passed into night—and the snow continued to pile up. Our hopes of reaching anywhere for Christmas vanished.

"It's funny how people react to circumstances like this. Some were peeved and cussed the railway. Others sat kind of sullen, staring out of the windows. Some were inclined to look on the whole thing as an adventure. These included the kiddies, of whom there were a half dozen on the train.

"As the light faded we remembered that this was Christmas Eve, and Santa Claus night for the kiddies and the rest of humanity. Back in the coaches those kiddies were wondering if Santa Claus would miss them and their parents had a hard job trying to square matters. Some said that Santa Claus would probably

(*Continued on page 27*)

The Grand Trunk Western Lines

A Special Department Devoted to Chronicling the Events of the Last Month in Business, Social and Sporting Activities

HOW many people are able to say that they have worked for one organization for 42 years? Of the few who can answer in the affirmative to this question, how many can say that they enjoy the work now as much as they did when they first started? And how many can say that they have seen their company grow from a struggling firm, having a hard time to keep its feet, to one of the biggest organizations in the world?

There is at least one man who can answer "Yes!" very promptly to all these questions. He is William Hoyer, of Climax, Michigan, who has been in the employ of the Grand Trunk Western Lines for the last 42 years, the last 25 of which he has been in charge of a branch of the road with headquarters at Climax.

And in all these years Mr. Hoyer says that he has never had an accident, in spite of the many startling experiences that he is able to relate. He can remember during the Winter, of 1918 and 1919, when the snow drifted to a depth of 15 feet in the "cut", a half a mile east of Climax. In order to keep the switches open, he, with his crew, in one month worked 22 nights and 31 days.

He came from Pittsburgh, the city of his birth, in 1855, and settled in Climax, where, later, he married Miss Ida Sherman.

In his early half a century of service with the railroad, he has travelled a distance equal to three times around the world. The fact that a section crew's "beat" extends over an area of five miles, that he has never been responsible for an accident is an enviable record.

He is planning an extensive vacation, one in fact that will enable he and his wife to visit practically all of his relatives, returning to Climax in the Spring.

Battle Creek, Mich.

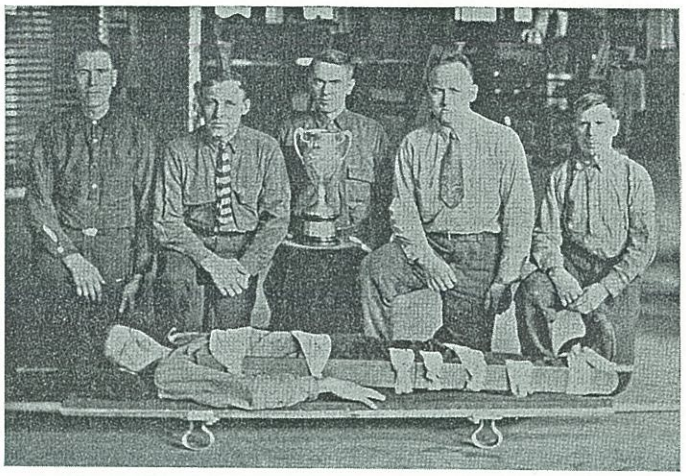
The Grand Trunk Western Social and Athletic Association held its annual election of officers, recently: President, D. T. Crawford; Vice-Presidents, A. L. Olsen, B. L. Tyler, C. J. Lampson; Secretary, Walde Byam; Treasurer, Fred Brunner; and Chairmen of Committees as follows: Basketball, J. P. Coleman; Basketball, A. E. Haywood; Soccer, Harry Lindsay; Tennis, Gertrude Frecking; Bowling, J. H. Walton; Hockey, Lorne Kilmer; Golf, W. MacKimmie; Horseshoe Pitching, Nelson Case; Entertainment, G. E. Murray; Ladies' Acitivities, Dorothy Webber; and Grounds, Geo. Donnelly.

The Pontiac Bowling team was defeated by the Battle Creek team recently, when the latter won three straight games.

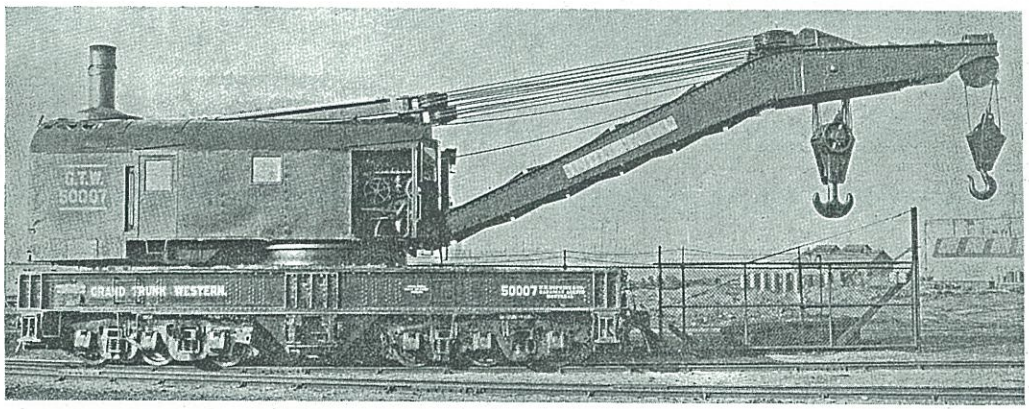
Flint came to the local alleys for the best contest to date, Battle Creek taking all three games but by a small margin.

At the beginning of the new year Battle Creek began to play the remainder of the 1928 schedule, at the new Recreation Alleys, which has recently opened, with the finest alleys in this part of the state. The schedule of games is as follows:

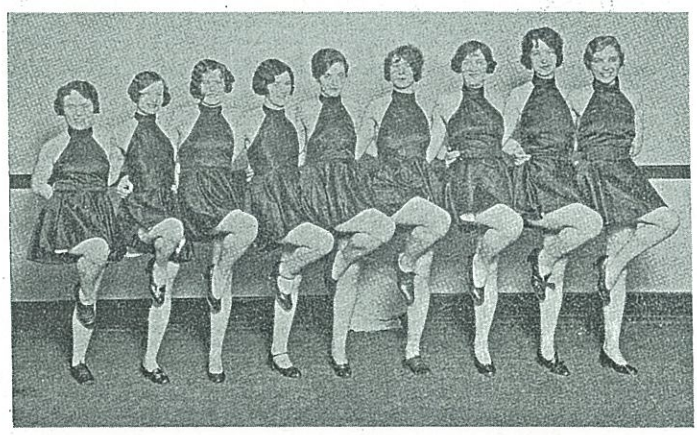
Battle Creek at Flint January 14; Pontiac at Battle Creek January 21; Chicago at Battle Creek February 4; Durand at Battle Creek February 11; Battle Creek at Detroit February 18; Battle Creek at South Bend February 25; Detroit at Battle Creek March 3; South Bend at Battle Creek March 10; Battle Creek at Durand March 17.



Port Huron Car Shops First Aid team, No. 1, champions of the Grand Trunk Western Lines, for 1926 and 1927, and winners of the St. John Ambulance Association trophy, given by the general officers of the Western Lines. From left to right: Ben Harrington, Jacob Kurzig, Vern Sloat, Captain; Jesse Hall and Jack Wilkins. Edward Edwards acted the role of patient.



The "Daddy of them all". The new mammoth wrecking crane, recently placed in service at Battle Creek, which has the power to lift 100,000 pounds without aid of "outriggers", or anchorage. It is steam and air operated and has the distinction of being the largest crane on the Grand Trunk Western Lines.



The Grand Trunk "Tuller Girls", whose dancing ability in the revue, "Memories", at an amateur production given by the Detroit Social and Athletic Association, recently, under the direction of Fred Oeffinger, and Edmund Meagher, won much applause. From left to right, Misses Eunice Morisette, Marguerite Arnold, Geraldine Kula, Grace McMuldren, Dorothy Marshall, Frances Wynkoop, Irene Samuel, Mary Burke, and Myrtle Meyer.

"Safe Working Employees", "Ever Cautioning Foreman" and "Consistently Active" safety committees are directly given the credit for the fine showing and record of the Battle Creek Shop during the recent 30 day "Safety Drive." During the entire period not a single accident was realized among the shop force, which makes a record to be proud of and one the men vow to duplicate.

Mr. Arthur Shelbee and Mr. Chas. Erwin have returned from Philadelphia where they inspected ten new heavy duty switch engines of the 8300 type at the Balwin Locomotive works. These engines are to be put in service on the Western Lines.

A new fire alarm system has been recently installed at the shops, which will rank among the best on the Canadian National. The new system includes 15 boxes, situated at various points all controlling one siren, placed mid-way of the shop, and a large gong in the power house to warn the engineer who in turn notifies the city fire department. Fire Chief W. P. Weeks promises to have at least one city company at the scene in three minutes after alarm is received.

A 50-foot extension has been added to the Reclamation Plant, which includes a section for motor car repair and a stock room. In the new location and with adequate facilities, the output will be increased to the maximum; thirty-four cars have been repaired in the last six months, with only two men employed in this department. Cars are now being received from all points on the Western Lines.

A new heavy-duty planer has been installed in the machine shop by the Liberty Tool Co. of Hamilton, Ohio. The blacksmith shop has added to its equipment a Pyre-Perfection Pyrometer, an instrument used to check furnace heats.

A new heavy-duty motor driven, Ryerson Lathe and Grisholt Link Grinder, of the latest design, has been installed in the Motion Department.

A new Acme heavy-duty Spot Welder has replaced the old obsolete type in the tin shop.

The Bolt Department is proud possessor of a new Cleveland Automatic Turret Lathe, which will handle general work in that department.

Recently added to the equipment of the Grand Trunk Western Lines is the mammoth new locomotive wrecking crane, No. 50007. With a capacity of 200 tons, it is considered the peer of them all, inasmuch, as it is the largest on either the Grand Trunk or the Canadian National systems.

The crane was built by the Industrial Works, of Bay City, Michigan, and is the last word in crane construction. It is credited with what is termed "a 50-ton free lift"; that is, the power to lift 100,000 pounds without the aid of "outriggers", or anchorage. It is steam and air operated. The electric light system is connected to an independent generator.

No. 50007 is placed in service at Battle Creek as the Battle Creek Auxiliary and replaces the 150-ton crane, which will be stationed at Chicago in the near future.

The basket ball season got under way at Battle Creek with every indication for a highly successful year. The

(Continued on page 41)

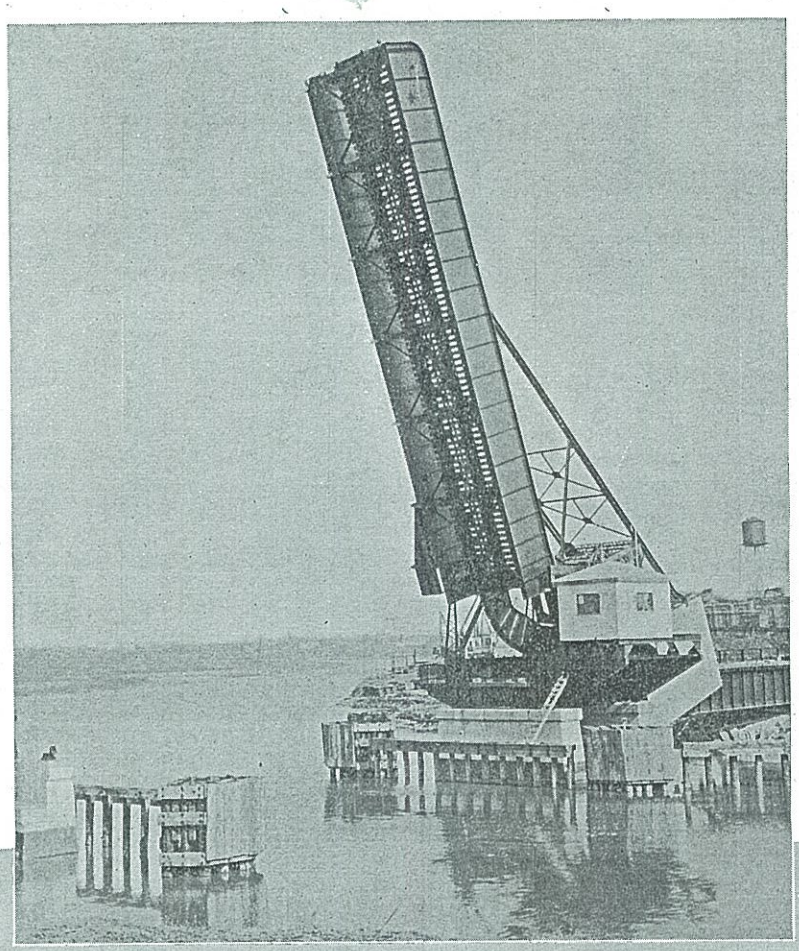
iron swing bridge which formed a part of the old main line from the village of Fort Gratiot, on the beautiful St. Clair River, to the city of Detroit, and which has now been dismantled after 70 years of service. This old structure has spanned the arch of time from stage coaches to the triumphant day when the *Lone Eagle* was to cross the broad Atlantic in less than 34 hours. Fixed in the superbly wrought iron girders, which were fabricated on the historic Thames, within hearing of Big Ben and within sight of the *Mother of Parliaments* itself, was a tablet, modest but majestic in its day. It reads:

HENRY GRISSELL
ENGINEER
REGENTS CANAL IRON WORKS
LONDON 1859

Old pioneers who railroaded when conditions were vastly different will be interested in this. Think of the freighters, rafts of squared timbers, that have passed under it when this part of Michigan was astir with lumbering activities! Think of the pioneer trains that have passed over this old structure! Busy immigration days. Thomas A. Edison, in his boyhood as news butcher on the Grand Trunk has ridden over this bridge many times. There is a historic ring in such names as the Canada Great Western, the Canada Grand Trunk and Chicago, Detroit and Canada Grand Trunk Junction Railway, as this line was originally known.

It was like shattering a cherished romance to dismantle this old structure. Spirits of long ago, spirits of Henry Grissell and his honorable guildsmen, who back on the Thames nearly three-quarters of a century ago, toiled through the long and hard hours to design and fabricate this majestic engineering feat of its day are inevitably recalled. Even the workmen on the dismantling job caught the tempo of it. Meanwhile plans were being made to preserve at least some of the old Grissell bridge as a relic; for while the march of progress, the demand for heavier equipment made replacement necessary, there was no deterioration of the old English iron and but for the demands of modern commerce it might have served for many more years.

The new rolling-type, bascule bridge which has replaced the old swing type, was designed to meet more modern de-



The steel installation includes approach spans of 79 feet on either side, a 23-foot bascule track girder and a rolling lift span, single leaf, of 100 feet length, in all 324.8 feet. The entire structure involves about 484 tons of steel, together with nearly 300 tons of concrete in the counterweights, on which is painted in three foot letters the words *Grand Trunk Western.*

The principal interest in this particular type of bascule rests in the fact that the channel span is so adjusted in balance that it can be operated by hand. Mathematicians will, perhaps, be interested in the counterweight, which is so adroitly arranged that equilibrium is maintained throughout the entire movement of the lift: That is it is balanced in all positions. This is brought about by an adept and prearranged utilization of the laws of gravity and equilibrium.

The channel span rolls backward over the track girder and it is remarkable to note that the operating machinery moves with it, the contact between the fixed and movable parts being a pinion which operates over the geared immovable racks. The bridge is operated completely by electricity. Two, 25 horsepower motors furnish the necessary power and these are supplemented by motor brakes and emergency brakes. Controls are arranged so that all signals and derails must be set against trains as the first condition of operation. The next position of operating lever releases the motor and emergency brakes, and the following position starts the motors for lifting. The order is inverse for the downward movement, so that the entire operation has been arranged on an almost fool-proof basis.

It is a splendid engineering achievement in which integrity has ruled throughout the 10 months of construction and if oxidation, the enemy of all things made of steel, can be held at bay the structure will last as long as its predecessor built on the Thames by Henry Grissell.

The project was handled under the supervision of Chief Engineer J. A. Heaman and under the direction of F. P. Sisson, Principal Assistant Engineer. H. D. F. Ingram was assigned as Field Engineer. Dan T. Murphy acted as Inspector of construction. The design and a part of the plans were prepared by Keller and Harrington, Consulting Engineers, of Chicago, at the direction of A. N. Laird, Bridge Engineer for the Western Lines.

This improved facility

Aug 1930

Links Stage Coach To Airplane

Ancient Landmark Passes with Erection of New Bridge at Port Huron—Grand Trunk Veterans Retire After Many Years of Service

By R. L. Gibbs

THE old wrought iron swing bridge over Black River, in Port Huron, which marked the first bridge to be constructed by the Grand Trunk Railway in the United States, when that railroad extended its lines from Ontario to Michigan, in 1859, has been dismantled and in its place a modern rolling bascule type bridge has been constructed.

In the passing of the ancient landmark lies a background of transportation progress that only history may recall. Considering the progress that has been made in transportation facilities it is interesting to turn back the pages to pre-Victorian days. In 1825, the staid London Quarterly Review gave vent to a thunderous outburst of indignation at the very audacity of a speed of 12 miles per hour! Harken to the words of the Editor: "What could be more palpably absurd than the prospect held out of locomotives travelling twice as fast as stage coaches." It might be taken for granted that, even at this time, a dreamy young engineering student, making his way through Eton or Oxford and thumbing meanwhile Newton's Principia, held different views than this Editor.

In any event, in 1859, he left his mark on the old iron swing bridge which formed a part of the old main line from the village of Fort Gratiot, on the beautiful St. Clair River, to the city of Detroit, and which has now been dismantled after 70 years of service. This old structure has spanned the arch of time from stage coaches to the triumphant day when the *Lone Eagle* was to cross the broad Atlantic in less than 34 hours. Fixed in the superbly wrought iron girders, which were fabricated on the historic Thames, within hearing of Big Ben and within sight of the *Mother of Parliaments* itself, was a tablet, modest but majestic in its day. It reads:

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Old pioneers who railroaded when conditions were vastly different will be interested in this. Think of the freighters, rafts of squared timbers, that have passed under it when this part of Michigan was astir with lumbering activities! Think of the pioneer trains that have passed over this old structure! Busy immigration days. Thomas A. Edison, in his boyhood as news butcher on the Grand Trunk has ridden over this bridge many times. There is a historic ring in such names as the Canada Great Western, the Canada Grand Trunk and Chicago, Detroit and Canada Grand Trunk Junction Railway, as this line was originally known.

It was like shattering a cherished romance to dismantle this old structure. Spirits of long ago, spirits of Henry Grissell and his honorable guildsmen, who back on the Thames nearly three-quarters of a century ago, toiled through the long and hard hours to design and fabricate this majestic engineering feat of its day are inevitably recalled. Even the workmen on the dismantling job caught the tempo of it. Meanwhile plans were being made to preserve at least some of the old Grissell bridge as a relic; for while the march of progress, the demand for heavier equipment made replacement necessary, there was no deterioration of the old English iron and but for the demands of modern commerce it might have served for many more years.

The new rolling-type, bascule bridge which has replaced the old swing type, was designed to meet more modern developments both in navigation and railway transportation. There were changes in the channel to be met and to accomplish this the swing span type could not be considered. In fact, no type seemed to meet the economical need and conditions at Port Huron, so well as the single leafed bascule, which in this case required a 100-foot span with an 80-foot clear channel.

The city having no public bridge in this vicinity, was granted by the railroad company the right of a pedestrian way on the right-of-way and provided a foot bridge attached to the upstream side of the railroad structure, with also an underpass on the north side, so that pedestrians may cross the river in safety from railroad traffic.

The problems with which the Grand Trunk Engineering Department were confronted were no means simple and by the time the tract for the substructure was awar plans had been worked out which h their expression in a very sensitive justment of the completed structure. two abutments penetrated deep into banks on either side and, on the bank, quicksand was encountered wh called for a pile foundation. Howe the most difficult work was done the three piers, two of which, desig for the track girder, required for th construction a 60 foot square coffer da

The foundations are on footings feet below the water level and rest on 100 piles each, latter driven 25 feet in blue clay, with points nearly feet below water level. As usual, where coffers required, the work is hazardous and subject to many foreseen delays. Most of the substructure work done in the winter months and without any ma accidents in which workmen were injured.

The two abutments and three piers required, in a 1,500 yards of concrete, of which 50 per cent. was d posited well beneath the water surface. On account the acid content of Black River, super-cement was us throughout, which was further supplemented by Inert waterproofing for all surfaces exposed to attack.

The steel installation included approac spans of 79 feet on either shore, a 23-foo bascule track girder and a roller lift spa single leaf, of 100 feet length, in all 324. feet. The entire structure involves abou 484 tons of steel, together with nearly 30 tons of concrete in the counterweights, o which is painted in three foot letters th words *Grand Trunk Western*.

The principal interest in this particula type of bascule rests in the fact that th channel span is so adjusted in balanc that it can be operated by hand. Mathema ticians will, perhaps, be interested in th counterweight, which is so adroitly arrange that equilibrium is maintained throughou the entire movement of the lift: That i it is balanced in all positions. This i brought about by an adept and prearranged utilization of the laws of gravity and equili brium.

The channel span rolls backward over the track girder and it is remarkable to note that the operating machinery moves with it, the contact between the fixed and movable parts being a pinion which operates over the geared immovable racks. The bridge is operated completely by electricity. Two, 25 horsepower motors furnish the necessary power and these are supplemented by motor brakes and emergency brakes. Controls are arranged so that all signals and derails must be set against trains as the first condition of operation. The next position of operating lever releases the motor and emergency brakes, and the following position starts the motors for lifting. The order is inverse for the downward movement, so that the entire operation has been arranged on an almost fool-proof basis.

It is a splendid engineering achievement in which integrity has ruled throughout the 10 months of construction and if oxidation, the enemy of all things made of steel, can be held at bay the structure will last as long as its predecessor built on the Thames by Henry Grissell.

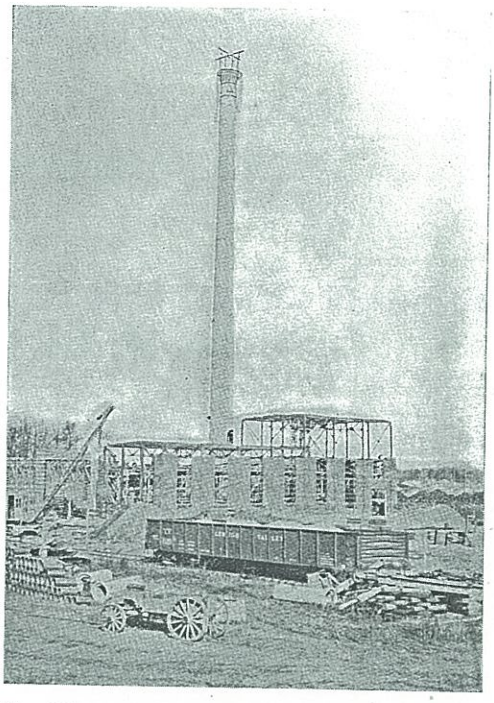
The project was handled under the supervision of Chief Engineer J. A. Heaman and under the direction of F. P. Sisson, Principal Assistant Engineer. H. D. F. Ingram was assigned as Field Engineer. Dan T. Murphy acted as Inspector of construction. The design and a part of the plans were prepared by Keller and Harrington, Consulting Engineers, of Chicago, at the direction of A. N. Laird, Bridge Engineer for the Western Lines.

This improved facility at the Port Huron Terminal means considerable to the future in-

Views illustrating the operation of the new, rolling-type bascule bridge recently completed over the Black River, at Port Huron, Mich. The former bridge which it replaced was constructed in 1859.

Smokeless Roundhouse Under Construction

Last Word in Locomotive Housing, at Pontiac, Michigan, Has Many Improved Features—Latest Events on Grand Trunk Western Lines



View of the new Pontiac roundhouse while under construction.

A SMOKELESS hostelry for locomotives will be completed early this year by the Grand Trunk Western Lines, at Pontiac, Mich., on the Detroit-Chicago main line. The new engine terminal embodies features which make it one of the most modern on the continent, and a tribute to the skill of the railroad's engineers. A conservative estimate of the saving which will be effected in the Pontiac locomotive terminal owing to new features in its construction is placed at about $15,000.

Above each engine stall in the usual type of roundhouse is a large metal canopy called a "smoke jack." This carries the smoke from the engine's fire-box, through the roof of the roundhouse into the open air. As the engines are belching forth smoke when they go into the roundhouse and also during the 20 minutes, or so that it takes them to steam up, it will be seen that these smoke jacks are necessary. Also, to be considered, is the smoke from the several engines that are kept continually steamed up should the despatcher require them in a hurry. An engine roundhouse, therefore, is generally associated with smoke, whenever engines are at home.

No smoke will issue from the new locomotive roundhouse, at Pontiac, even when it is full of engines, all with steam up ready for immediate use. In designing the new roundhouse the engineers have been able to eliminate all smoke jacks through which the smoke can escape. Owing to the lack of smoke the interior of the engine house will always be as clean as a well-ordered machine shop.

The new roundhouse, at Pontiac, Mich., as it nears completion. At the right is seen W. G. Heggie, Field Engineer, who with Anthony Nadrach, of the Mechanical Department, were in charge of construction.

An important factor in the new design is the saving of coal required to steam up an engine before it leaves a roundhouse. An additional savings effected is that of $3 per engine on washing the locomotives. In winter, engines standing outside a roundhouse are kept with steam up and a "watcher", at 45 cents an hour is required. No watchers will be required at the Pontiac terminal.

Its duty done for the time being, the steel mammoth points its nose to the engine terminal and makes for the tank where 100,000 gallons of water awaits its coming. How different this clean fresh draught must feel compared to the muddy river water of the olden days and the old wood tub with the leaky stays! The next stop is at the new automatic, electric coaling station, all steel and concrete, with a storage capacity of 500 tons.

Somewhat refreshed, it goes to the new cinder pit, dumps the cinders and has the fire "drawn." The cinder pit is equipped with an overhead electric travelling crane. This crane takes the cinders out of the pit and stores them on the ground. During the cold winter months, these cinders will not have to be stored in coal cars as has been the custom.

A hot shower bath at the washer platform removes the dirt and dust of the road before the engine goes into the roundhouse. Slightly different from the customary shower bath, this one consists of a mixture of paraffin oil and hot water forced through a nozzle under air pressure. The jacket is now shiny, wheels and tender washed up, but the boiler is still unclean. The roundhouse is the next stop, via the three-point, electrically operated, balanced turntable.

With the entrance into the roundhouse is learned the secret of the absence of the smoke and smoke jacks. The engine goes to its stall with its fire drawn and, consequently, emits no smoke. In the usual type of roundhouse, before certain necessary inspections could be made on an engine it had to be fired up. This, also, had to be done before the engine returned to duty and, as mentioned before, several locomotives were kept with pressure up for instant use — all of which created smoke. The new Pontiac terminal, however, is equipped with what is called the "direct steam system."

Instead of letting the engines get cold pounds pressure from the terminal's own power plant, which, incidentally, burns oil and with its storage capacity 100,000 gallons, is one of the largest fuel oil plants in its section of the country.

While in the roundhouse, a four-inch bed of coal is laid on the engine's grates. When an engine is ordered out, it can leave the roundhouse immediately on the pressure it has received from the terminal's plant. Once outside, an oil torch is applied, and the engine is fired up and ready for action.

As the locomotives are never allowed to cool down, the expanding and contracting which took place where they had to be fired up with coal each time does not take place. The various inspectors can also do their work more efficiently, as they can make their tests at any time. Under the old system they had to wait until pressure was up and then they all clambered on the engine at once.

Although the building has a heating system of its own, a considerable saving will be effected owing to the radiation from the locomotives being more than enough to heat the whole place. The roundhouse has a capacity of 10 engines inside, and 10 outside. Those outside are kept at 200 pounds pressure from the central plant in the same way as inside and not being under their own steam do not require the services of a watcher during winter weather.

After the engine is washed out in the roundhouse, the boiler-makers blow out its flues with air and caulk any leaks. The machinists inspect the bolts, nuts, and other working parts to see that they are tight and safe for the next trip. The air brakes are tested and the electricians ensure that the headlight is burning brightly. The machinists go over the running gear and the boiler-makers O.K. the boiler. Clean inside and out, all parts working perfectly, the engine is only waiting an order from the despatcher to be away again.

A more detailed description of the mechanical features of the roundhouse follows:

The exterior walls of the roundhouse are constructed with a reinforced concrete framework and shale brick curtain walls. The interior framework is a heavy timber construction with bolted and dowelled corbels and bracing with two-inch wood sheathing for roof construction, covered with four ply, built-up asphalt roofing. The roundhouse is designed to admit a maximum of light, hot galvanized steel sash being used on all outside walls and extra heavy wood sash in the roof lantern which is located at the end panel from the engine doors in order to light the mid section of the roundhouse. The engine doors are constructed with steel framework wood panels, Canadian National Railways standard.

No smoke jacks are provided due to the direct steaming system, but each stall is equipped with stationary type roof ventilators.

The toilet facilities are provided in a separate building reached from the roundhouse by a separate corridor. There are separate facilities for firemen and engine

April 1931

Flagship of Ferry Fleet Makes Maiden Trip

"City of Milwaukee" Given Enthusiastic Reception by Grand Haven Citizens Upon Initial Voyage—News of Grand Trunk Western Lines

The *City of Milwaukee* as she left Milwaukee for Grand Haven on her inaugural run.

THE United States' Coast Guard look-out at Grand Haven station was searching the darkness of Lake Michigan, looking for a light to come from the western shore, the Wisconsin side. Lines of cars crowded the lake front streets. Men, women and children, and even babes in arms were waiting. It was nearing midnight.

Somewhere out on the great lake was a brand new million-dollar ship, a railroad afloat, making its maiden crossing. The *City of Milwaukee*, fresh from the yards of the Manitowoc Ship Building Corporation and latest addition to the Lake Michigan car ferry fleet of the Grand Trunk-Canadian National Railways, had left Milwaukee late that afternoon. It carried a full load, 30 cars of Case tractors, destined for far-off Russia. A whole day was being saved by this shipment cutting across Lake Michigan and avoiding the congestion at the Chicago gateway.

And the citizens of Grand Haven, Michigan, were waiting up to acclaim the new vessel on its maiden trip. The Coast Guards sighted her about 10.30 p.m., and flashed word to the municipal plant. Its whistle broke the news to the waiting crowds. Then more whistles blew, bells rang and automobile horns tooted, as the giant ship, lighted from stem to stern, slackened speed and steamed slowly up the river. A line of cars, their horns blowing, paraded slowly in along the shore, keeping even speed with the regal ship as she glided up the harbor to the car-ferry slip. The *City of Milwaukee* answered the salutes, the deep tone of her new whistle echoing from the sand hills around the city.

The engines were stopped, the vessel moored, and then the crowds surged aboard, up the companionway to the main deck and scattered to all parts of the boat. The huge, powerful engines were the centre of interest for the men; but the women were to be found elsewhere. In the spotless new galley, white paint and tile floor, with every convenience for the chef, the women paused and examined and found much to praise. The dining saloon and main cabin proved no less attractive. Ingenious electric fans concealed within the light fixtures in the dining saloon provide efficient ventilation.

The main cabin is flanked on either side by commodious staterooms containing Pullman-type berths and built-in lavatories. The woodwork is of golden oak and the ceiling white. There is a smoking compartment on the port side off the main cabin and forward is an observation cabin with a generous number of windows providing wide vision ahead.

The local Chamber of Commerce and members of the Harbor Commission greeted the Captain early the next morning and were taken over the ship. A formal and official reception to the Grand Trunk officials, when a special party will cross from Milwaukee for inspection purposes, will be held later, when the weather is more propitious. This will probably be some time in May.

But getting settled in a new steamboat is something like moving into a new house. So it was with the *City of Milwaukee*, according to a *Milwaukee Journal* staff reporter who was present when the ship was turned over to the owners and headed up the lake to her home, the Port of Milwaukee, from the shipyards at Manitowoc.

"The hull is as sound as a dollar;" he wrote, "the engines run as smooth as a sewing machine, but then there are the little things in life. As witness:

"Second officer to port steward, who has been going around hanging curtains, like a housewife: 'Say, listen, Mac. According to the food and drugs act, by act of Congress, June 30th, 1906, we're entitled to a cuspidor in that lavatory off the texas. A man has to spit, you know.'

"Second officer to port steward, later: "That stool in the pilot house isn't sound enough, Mac. It was built to be all right back of a ribbon counter, but in a pilot house, the answer is nix. One good bang and there won't be any stool.'

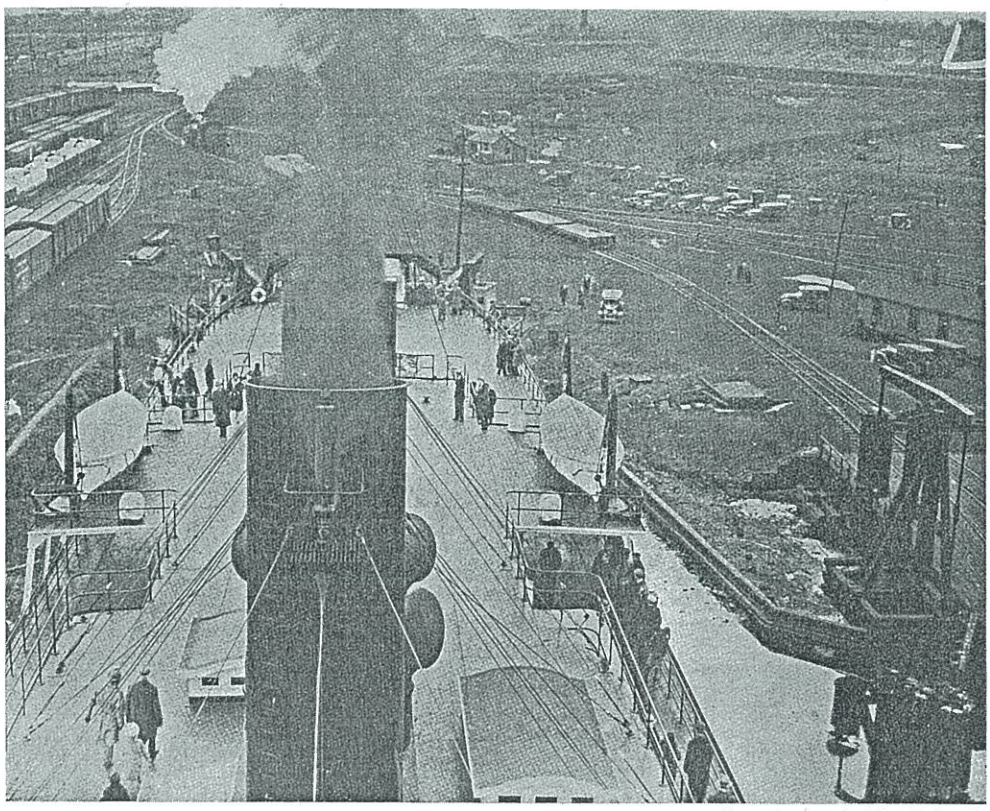
"Mac: "We'll fix that when we get to Milwaukee, Jim."

"Scene II:—Three in the dining saloon as the ship drops the pierheads at Manitowoc behind. The wind southerly and fresh. Long rollers sweeping in, touched up here and there by whitecaps. The ship gets into the trough of them making the turn to head south. Two bottles of horseradish atop the buffet swing into the opening steps of a 'danse macabre'. The cadence increases and the movement of the horseradish becomes frenzied. The bottles topple off. The purser makes a grap for them, but misses. Good glass in the bottles. They don't break. The ship rolls over some more and the crockery on the purser's table takes advantage of his absence to go into a shimmy. A catsup bottle crashes and a bottle of Worcestershire follows suit. The purser makes a grab for the rest of his dinner.

"Port Steward: 'They must be turning around.

"But the swinging around is completed and gentle undulation succeeds the sidewise motion as the rollers sweep up to the bow and pass along the keel. The totem dance in the dining room is ended."

A fine boat, mates, but it needs a cuspidor and the pilot wants a new stool.



Photographs courtesy the "Milwaukee Journal"

Looking down from the crow's nest, as the *City of Milwaukee* left on her maiden voyage across Lake Michigan, with a load of 30 freight cars. The huge ships of the car ferry fleet save as much as a day in the transit of freight between the northwest and eastern markets by avoiding the congestion at the Chicago gateway.

Port Huron, Mich.

Port Huron Recreation Association bowling team entered in the Western Lines Inter - City League was only able to finish in third place on the Eastern Division, Pontiac finished in first place and congratulations are in order for H. M. Wood, Chairman of Bowling for Pontiac, and the splendid bowlers that composed his team. Battle Creek proved the winners of the Western Division and in the final matches with Pontiac, the *Cereal City* boys took the Western Lines' championship and the Whittenberger Trophy. "Chet" S. Wagner and his champions deserve credit for their splendid performance. The local bowlers, who participated in the Inter - City League, were: Gus Evert, Roundhouse; James Scahill, St. Clair Tunnel; Ike Snyder, Stores Department; Merle O'Rourke, Walter Kowitz and David Archibald, Jr., of the Car Shops.

The Port Huron Terminal Bowling League of eight teams is being led by the *Internationals* with a small margin, followed closely by the *Maple Leafs*, *Eastern Flyers* and *National* teams. All teams in this league are very evenly matched and the final games on the schedule ought to be interesting, as the rivalry is keen for first place.

MAY 1927

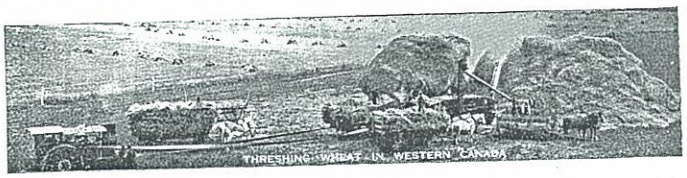
M.L. MAN INVENTS NEW FORD GAS SAVER & QUICK STARTER

Walter Critchlow, 3980E street, Wheaton, Ill., has patented a new gas saver and quick starter that beats anything ever gotten out. With it on Fords show as high as 66 miles on 1 gallon. Other makes do equally well. **This new invention saves gas and oil, makes a Ford start instantly in any weather and completely decarbonizes the engine.** Mr. Critchlow offers 1 free to advertise. Write him for one. He also wants County and State Distributors who can make $500 to $2500 monthly.

GOOD "LISTENER"

O'Donnell—Stimpson claims he has two receiving sets and that he can tune in on a fight program with either one.

O'Connell—That's his little joke. He has a party phone, besides his radio set, you know!



THRESHING WHEAT IN WESTERN CANADA

Car Ferry "Madison" in Service

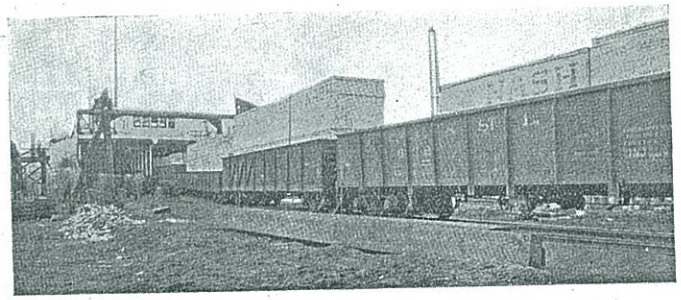
Made Maiden Trip Filled to Capacity With Train Load of Motor Cars---Ferry Augments Service on Lake Michigan

AN OUTSTANDING transportation event occurred at Milwaukee recently when the new Car Ferry "Madison", arrived fresh from the Manitowoc ship yards, being met at the Ferry Dock by a number of prominent traffic men and public officials, all of whom were very complimentary, expressing themselves in terms which augur well for its future success in helping establish the route between Milwaukee and the East as the most popular.

The "Madison" is the sister ship of the "Grand Rapids", which was placed in the Lake Michigan service, on December 8th, thus completing a fleet of four car ferries which will materially improve the service and enable the Grand Trunk-Canadian National route to accord the best service between Northwestern United States points and the East.

The "Madison", as will be remembered was the first ship to be christened with milk, a feature which was largely commented upon by the press and considered as an unique invasion of traditional ceremonies. This was done in recognition of Wisconsin as the greatest dairy state.

The feature that distinguished the initial trip of the "Madison" was the fact that it was entirely loaded with thirty carloads of Nash Motor Company cars. Traffic Manager A. Parr, of the Nash Kenosha plant, generously offered to contribute its first load and was enthusiastically supported by his colleagues, Mr. Henry Gamm, Traffic Manager, Milwaukee Nash plant; Mr. L. F. Burkardt, Traffic Manager of Racine (Ajax) plant; and Mr. F. C. MacFarlane, of the Export Department; and their kind efforts contributed a total of fifty-six carloads of Nash cars, the balance being loaded on the Car Ferry "Grand Haven", both loads being consolidated into a special train at Grand Haven.



Loading a train of Nash cars on the Car Ferry "Madison" at Milwaukee, Wis.

The "Better 'Ole" Close at Hand

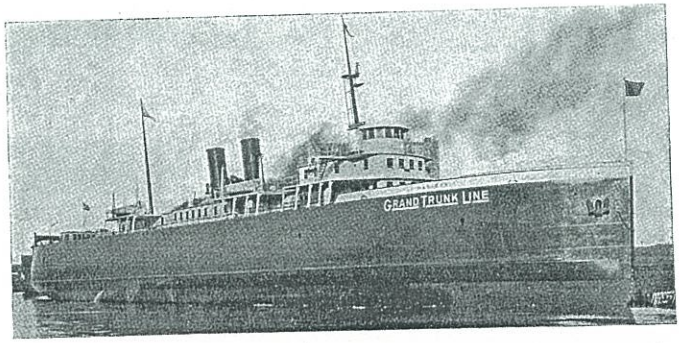
(Continued from page 17)

in the small lakes and streams of the mountain area and the angler can enjoy excellent sport on his way to British Columbia waters.

British Columbia offers everything from mountain trout to the king salmon, and has both fresh and salt water fishing. Trout found in the waters of this province include lake trout, rainbow, Dolly Varden, Arctic and Mountain trout; spring and coho salmon are plentiful and the waters of the province are within easy reach of the man or woman who would enjoy a fishing holiday.

A NATURAL CORRECTION

"Her niece is rather good looking, eh?"
"Don't say 'knees is,' say 'knees are'."



The Grand Trunk-Canadian National, Car Ferry "Madison", one of the biggest car ferries on the Great Lakes, which was recently put into service on Lake Michigan, operating between Grand Haven, Mich., and Milwaukee, Wis. Apart from its capacity for hauling freight cars, the "Madison" has first class accommodation for 100 passengers.

JAN 1931

Monarch of Car Ferries Launched

"City of Milwaukee" to be Flagship of Grand Trunk Car Ferry Fleet—Will Carry 28 Loaded Cars and 200 Passengers

By F. W. Bertram

THREE thousand tons of steel crashed through space. The waters of the Manitowoc River showered 40 feet into the air. All nearby water craft rocked in the mighty swells. Whistles blew; thousands cheered. A huge million dollar car ferry dipped far over to starboard; back to port; then righted itself to float majestically on an even keel. A full set of multi-colored ship's flags, blown by a fresh wind, stood out in relief against the winter sky. The giant new Great Lakes car ferry of the Grand Trunk-Canadian National Railways was thus sent into its natural element for the first time.

By this month the craft will have been completed and will be ready to take its place as the flagship of the Grand Trunk Western Railroad's Lake Michigan fleet of car ferries which save a whole day in the shipment of the produce of the vast North-West to the markets of the East and to the Atlantic seaboard. By taking freight trains from the North-West across to the eastern shore of Lake Michigan, where they change to land rails again and go by fast rail schedules to Eastern markets, the car ferries enable shippers to avoid the congestion at the Chicago gateway.

The launching of a large ship is a thrilling event to watch and a sight that is not offered every day. The launching of the Grand Trunk's new car ferry, the *City of Milwaukee*, was particularly interesting in that it was launched broadside, instead of stern first, as is generally the custom. All launchings at the yards of the Manitowoc Ship Building Corporation are broadside, owing to the particular shape of the river at the yards.

Every detail of the new flagship's debut was carried our perfectly. A special train of the Chicago and North Western, from Milwaukee, arrived at the main gate of the ship-yards, bringing several hundred business men, Federal Government and city officials, railroad and steamship representatives and officers of the Milwaukee Association of Commerce. The states of Wisconsin, Illinois and Michigan were well represented.

Under the direction of A. L. Pitz, General Superintendent of the Manitowoc Ship Building Corporation, 240 workmen, with sledge hammers, were busy pounding the wedges that raised the great ship off its bed on the launching braces. About an hour after the special train bearing the guests arrived, all the workmen shifted over to the port side of the car ferry towering above them. Again the sledges beat in ponderous rhythm and the ship eased almost imperceptibly toward the water, straining at the three-inch ropes that held the "trigger timbers." Finally the men scuttled out from under the boat at a call of warning, until only a half dozen remained at bow and stern.

All eyes centered on the flag-draped, christening platform at the bow. Mrs. Walter J. Wilde, wife of the Collector of Customs for the District of Wisconsin, carrying a huge bouquet of American Beauty roses, held a be-ribboned bottle in readiness. The signal was given. Mrs. Wilde hurled the bottle against the rivetted steel plates of the hull.

"Cut 'em away," shouled Mr. Pitz. Eight men, four under the bow and four under the stern, swung with razor-keen axes. Eight, three-inch ropes snapped and as many trigger timbers were released. Cameras of newsreel and newspapermen were trained on the ship.

Mrs. Walter J. Wilde, wife of the Collector of Customs for the District of Wisconsin, just before she hurled the ribbon-draped bottle against the steel plates of the new car ferry, christened in the time honored fashion.

The huge vessel slipped, jerked a bit, gathered speed and with a great rush but little noise, hurtled down the greased skids. The *City of Milwaukee*, flagship of the fleet, was christened after the fashion decreed by tradition.

Following the launching, the Manitowoc Ship Building Corporation was host to several hundred guests at luncheon in the Hotel Manitowoc. J. E. Thiell, Secretary of the Manitowoc Ship Building Corporation, was toastmaster.

The *City of Milwaukee* bears the name of the ninth city in the United States in the value of manufactured products and the 13th in population. Its fine set of flags is the gift of Milwaukee's very active and progressive Association of Commerce.

When the ship goes into service in January, it will make daily trips between Milwaukee and Grand Haven, Michigan, until spring, when the main Grand Trunk port on the Michigan shore will be moved to Muskegon, where a new car ferry terminal harbour developments are being completed.

One of the largest of its type on the Great Lakes, the *City of Milwaukee* will be able to carry 28 loaded freight cars of the largest type and 200 passengers. It has an overall length of 360 feet and gross tonnage in excess of 3,000 tons. Its engines are of the twin screw, reciprocating triple expansion type. The new car ferry is the last word in ships of its class, has the latest in mechanical equipment, and the furnishing of the quarters of both passengers and crew is carried out in the most up-to-date manner. The ship was built largely of the products of Milwaukee and Wisconsin industries. Twelve hundred men were employed in its construction. Captain C. E. McLaren, of Milwaukee Manager of car ferries for the Grand Trunk, supervised the construction.

Captain John F. Cavanaugh, of Grand Haven, who has sailed the Great Lakes for 40 years, will take command of the *City of Milwaukee*. Captain Cavanaugh, who has served the Grand Trunk as Master for the last 17 years, leaves the *Grand Rapids* for the new ship. With the *City of Milwaukee*, the Grand Trunk will have four car ferries operating on the Lake Michigan route.

Sir Henry Thornton, speaking in Muskegon, recently, predicted a rapid growth for the Lake Michigan car ferry route, owing to the rapidity with which freight can be handled over it between the east and the west as compared with all rail routes.

Milwaukee, western terminal of the Grand Trunk car ferry line, has a harbour thoroughly equipped for all types of lake commerce and, in 1929, handled 8,500,000 tons of cargo. The city leads the United States in diversification of industry. It is worthy of note that Milwaukee has the largest manufacturers of steam shovels, dredges and excavators, cranes and hoists, concrete mixers and road pavers, motorcycles, refrigerating machinery, electrical controls, silk hosiery, work shoes, wheelbarrows, cement machinery, gasoline cracking stills, automobile frames and large diameter gas and oil line pipe. Milwaukee has produced the

(*Continued on page 44*).

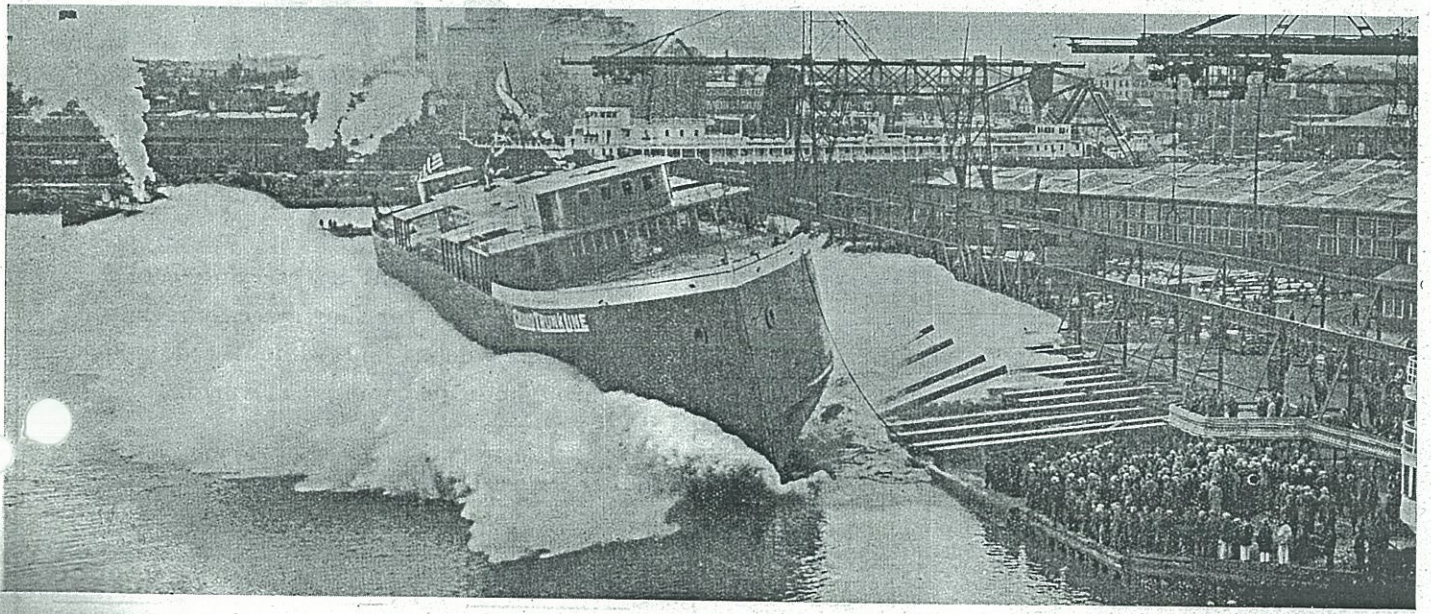


Photo courtesy The Milwaukee Journal

The Grand Trunk's new million dollar car ferry made a mighty splash when it slid broadside down its skids at Manitowoc, Wis. When completed in January it will take its place as the flagship of the Grand Trunk's Lake Michigan car ferry fleet.

The Grand Trunk Western Lines

A Special Department Devoted to Chronicling the Events of the Last Month in Business, Social and Sporting Activities

THE City of Hamtramck, having a population of approximately 100,000, is surrounded by the City of Detroit, its main thoroughfare is Joseph Campau Avenue, an important avenue extending from the river in Detroit northerly through Hamtramck to the northerly line of that city, thence continuing. At present this avenue is 66 feet in width, and carries an enormous volume of pedestrian, vehicular and street railway traffic between Detroit and Hamtramck, crossing the tracks of the Mount Clemens Sub-division of the Grand Trunk, as well as the Belt Line and Bay City Division of the Michigan Central Railroad Company, where the movements on both railways are heavy. Negotiations between railway companies and the city for grade separation have been in progress for years and an agreement has finally been consummated, plans approved, contract awarded and actual construction work is in progress. The Grand Trunk, at present, have two tracks crossing this avenue. On the completion of the work six tracks are to be provided in accordance with plans which take care of the industries with practically no inconvenience while work is in progress. The railway tracks are to be elevated seven feet and the street widened to eighty feet and depressed eleven feet. The separation of these grades will eliminate a hazard to the public and improve operating conditions for the railway companies appreciably. As the work progresses further details will be given from time to time.

The work is being carried out under the general direction of Mr. J. A. Heaman, Chief Engineer of the Grand Trunk, the construction being under the supervision of Mr. F. P. Sisson, Division Engineer. Mr. A. N. Laird is in charge of the design of the structure.

Port Huron Terminal

The Port Huron Grand Trunk baseball club has, for the fourth season, earned an enviable record among Class A amateur clubs in Eastern Michigan. Playing 29 games, so far this season, they have lost but nine contests. After winning the Western League Championship for the second consecutive year, the team won the Championship of the Imlay City Fair. Exhibition games as the attraction of three county fairs were booked by Manager Otto Kowitz. Playing two days at the Imlay City Fair, the club won from the Almont independents; after eleven innings, by a score of 10 to 11; on the second day they defeated the Imlay City Independents by 5 to 7.

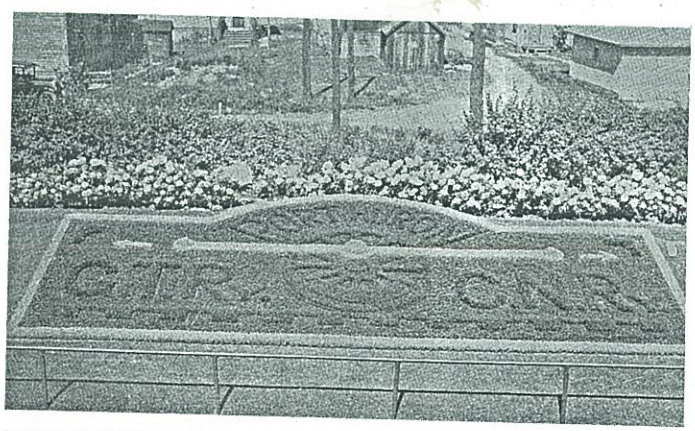
Both of these clubs had several minor league players in their line ups and afforded the Grand Trunk stiff opposition. These contests were witnessed by 12,400 fans. At the two other fairs, the Grand Trunk was defeated, losing at Croswell, Michigan, to the Illinois Colored Giants, a road club, travelling out of Chicago, by a score of 4 to 12, and at Sandusky, Michigan, to the Lexington-Tri County Club by 5 to 0. The two defeats are the only losses in the last 19 contests engaged in by the Grand Trunk team and a string of 10 victories were recorded prior to the defeat at the Croswell Fair.

In a recent contest with the Oakman Boulevard Athletic Club, of Detroit, in the local park, the Grand Trunk was the winner by a score of 1 to 0. Merle "Punk" O'Rourke, pitching for the railroaders, came within one hit of entering the baseball hall of fame, when he held the losers to the lone hit. Shields, pitching for Oakmans, allowed but 3 hits. Recent victories with State Clubs include: Detroit Nationals, Selfridge Field Aviators, Detroit Tool Hardware and Guy's Vagabonds of Detroit. As a climax to the season, a three-game series with the Tri-County team of St. Clair, Michigan, has been booked to decide the St. Clair County Championship. The Grand Trunk and St. Clair teams being the only organized clubs in the county, keen rivalry exists and the enthusiasm of fans on both sides is expected to draw record crowds at the Grand Trunk Park.

The local Grand Trunk Social and Athletic Association recently held their annual election of officers, following a business meeting which was very well attended. The officers elected were as follows:

Honorary President, R. H. Woodward, Storekeeper; Honorary Vice-President, H. Flynn, Stores Department; President, H. G. Love, Shop Superintendent; Vice-President, H. C. White, Superintendent Terminals; Secretary, R. L. Gibbs, Car Shops; Treasurer, J. D. Morash, Car Shops; Business Manager, L. E. Bell, Car Shops; Chairmen of various committees as follows: Membership, Percy Parker, Transportation Department; Entertainment, R. Swanson, Car Shops; Baseball, Otto Kowitz, Car Shops; Basket Ball, Ike Snyder, Stores Department; Bowling, Vern Sloat, Car Shops; Horseshoe, C. D. Fockler, Car Shops; Tennis, Fred Gast, Rip Track; Indoor Ball, Geo. Murray, Car Shops; Bowling Green, Robt. Woods, Car Shops; Soft Ball, Otto Schultz, Car Shops; Golf, Wm. Schleyer, Car Shops; Publicity Agent, R. L. Gibbs, Car Shops; Travelling Representative, C. D. Fockler, Car Shops; Auditing Committee: R. H. Woodward, Stores Department; Lee Snover, Freight Department; A. Thernstrom, Freight Department; Executive Committee: W. Warren, Car Shops; Vern Sloat, Car Shops; R. L. Gibbs, Car Shops.

The Port Huron baseball team, Grand Trunk Western Lines champions, winners of the Dalrymple baseball trophy. Standing, left to right, Charles Hammel, Association scorekeeper, car shops; George Nye, coach, engineer; Carl Ullenbruc, pitcher, roundhouse; Al Kuschell, pitcher, car shops; Walter Kowitz, third base, car shops; Carl Seig, first base, yard office. Seated, left to right, Al. Sheffer, centre field, car shops; Joe Carrier, catcher, car shops; Merle "Punk" O'Rourke, pitcher, car shops; Otto Kowitz, fielder, Manager, car shops; Tom McDonald, second base, Captain, car shops; Francis Lane, catcher, car shops; Dudley Fields, short stop, fireman; Frank "Dinty" Moore, left field, stores department; Master Carl Seig, Jr. mascot.



An unusual and attractive flower garden at the Grand Trunk station, at Port Huron. The design represents the wheel of a locomotive and the driving rod. Port Huron being the divisional point on the boundary, the arrows at each end of the bed point toward the Canadian National station, at Sarnia, and the Grand Trunk lines out of Port Huron.

The new freight station of the Grand Trunk Western Lines, recently opened at Port Huron

A terminal soft ball league, which was organized recently, is interesting a great number of employees. Six teams are entered, representing the various departments, and keen rivalry has developed for the terminal Championship. The standing of the league in games won and lost is:

Foremen and Clerks, 5—3; Steer Shop, 5—3; Freight Sheds, 4—3; Rip Track, 4—4; Woodmill, 3—4; Coach Shop, 2—6.

The annual terminal bowling league has been organized and twelve teams have entered representing the various departments. The Monarch Bowling Alleys have been leased for Monday nights, which will be known as "Grand Trunk" night. Some of the teams' names represent the famous limited trains of the Western lines and Canadian National Railways, while others bear the names of parlor and business cars. Entries are: Acadians; Tunnel; Muskoka. No. 84; International; National; Huron; New Yorker; Michigan; Chicagoan; Maple Leaf; Pullman and Pontiac No. 90.

Detroit, Mich.

The Detroit Grand Trunk Western Social and Athletic Association held its annual election of officers, Thursday, September 29th, with the following results: President, A. E. Shoreland; Vice-President, V. C. Palmer; Secretary, Miss Rhea L. Kuhn; Treasurer, G. B. Bird; Baseball, John Donovan; Basketball, R. Magness; Bowling, L. De Yonge; Golf, W. H. Edmondson; Playgrounds, S. J. Trembath; Publicity, Fred Oeffinger; Dramatics, Harry Bubbs; Business Manager, A. M. Beardsley; Social, C. A. Brayton; Hockey, R. E. Girard. A new office, that of Business Manager to the Chairman of Dramatics, was created to facilitate this branch. The Chairman of Playgrounds assumes charge of horseshoes, which has taken quite a hold upon the employees. The annual meeting and installation of officers occurred the Friday following the election. Votes of thanks were tendered the various retiring officers and thereafter business was resumed, which portended toward a vigorous season, especially toward a membership drive to swell the roll of the association. Semi-monthly meetings will be held by the Board of Chairmen.

The evening of the same day of the annual election, ushered in the 1927-1928 bowling season with full swing and eight teams participated. Bowling undoubtedly constitutes the major attraction of the association, drawing upon the efforts of more members than any other section. Much rivalry and keen competition consistently pervades the season's program. The representative bowling team of last year made quite a showing, being runner-up, losing out by a very few pins and with this record, Mr. De Yonge, present Chairman, hopes to turn the tables. The local office bowling league opened October 3rd, with four teams entered. Creditable scores were displayed. The roll of lady bowlers is fast increasing, as well as its enthusiasm with each succeeding year. The Brush Street "Peanut League" have eight teams entered in the mixed doubles of their own league.

Culminating the efforts of the baseball and dramatic sections, a joint banquet was held Wednesday, September 21st, at the Fort Shelby Hotel, with about

(*Continued on page 35*)

NOV 1930

Three Cities Celebrate New Station Opening

Muskegon and Sister Municipalities Crowd by Thousands To Witness Ceremonies to Open Grand Trunk Depot · · · News of Western Lines

TURNING out in thousands to the opening of their new passenger station the citizens of Greater Muskegon, Michigan, revealed again the spirit of team-work which has brought them to the position of sixth city in the United States in per capita value of manufactured goods.

Less than a year after providing double daily passenger service to Detroit, with direct connections for New York, Philadelphia, Toronto, Ottawa, Montreal, and other eastern points, the Grand Trunk Western has given Greater Muskegon a new passenger station which is among the finest on the region. These developments have been made possible in such a short time through the whole-hearted co-operation of the cities of Muskegon, Muskegon Heights, and North Muskegon with the Grand Trunk Western, and are a striking example of what can be accomplished with all agencies working as a harmonious whole.

A new car ferry dock is now being built at Muskegon and next year will see the Grand Trunk's Lake Michigan fleet bringing across to Muskegon the produce of the vast Northwest. At least 24 hours are saved by freight traffic between the northwest and the east through the use of the car ferry routes which enable the railroads to avoid the delays at the Chicago gateway. Also, the Grand Trunk's improved freight service places Muskegon in the same position with east-bound freight traffic as Chicago, cars on trains leaving Muskegon at six o'clock at night for eastern cities getting the same delivery as cars leaving Chicago at the same time.

Muskegon has been quick to realize the impetus to industrial development which can be given by up-to-date transportation facilities and the growth of the city has been steady and rapid. At one time, it was known as the "Lumber Queen of the World", cutting, in 1888, nearly 800,000,000 board feet, or more than had ever before been cut at any single point. About two years later, however, the lumber industry began to decline. A great fire swept the city and many people left, and the "Sawdust City", as it was then known, appeared doomed to extinction. The spirit of its citizens remained, however; new industries were brought in, and now it is forging ahead with rapidity. Annually, Muskegon produces more than $100,000,000 worth of fabricated goods.

To entertain the thousand residents of Greater Muskegon who came to the formal opening of the new passenger depot, at Peck and Laketon Streets, the Grand Trunk brought the 25-piece uniformed band of its Recreation Association from Port Huron, and its 14-piece orchestra from Detroit. From a band stand, specially erected by the city for the occasion, the Grand Trunk band entertained the crowds prior to the opening ceremonies. The orchestra played for dancing in the main lobby of the station. So great were the crowds that the band was later compelled to play for dancing also, in another part of the station. Cars were parked for several blocks in each direction from the depot and the people kept arriving until midnight, when the band and orchestra had to entrain for their home cities. Many others who were not able to be present on the Saturday night of the opening viewed the station the next day.

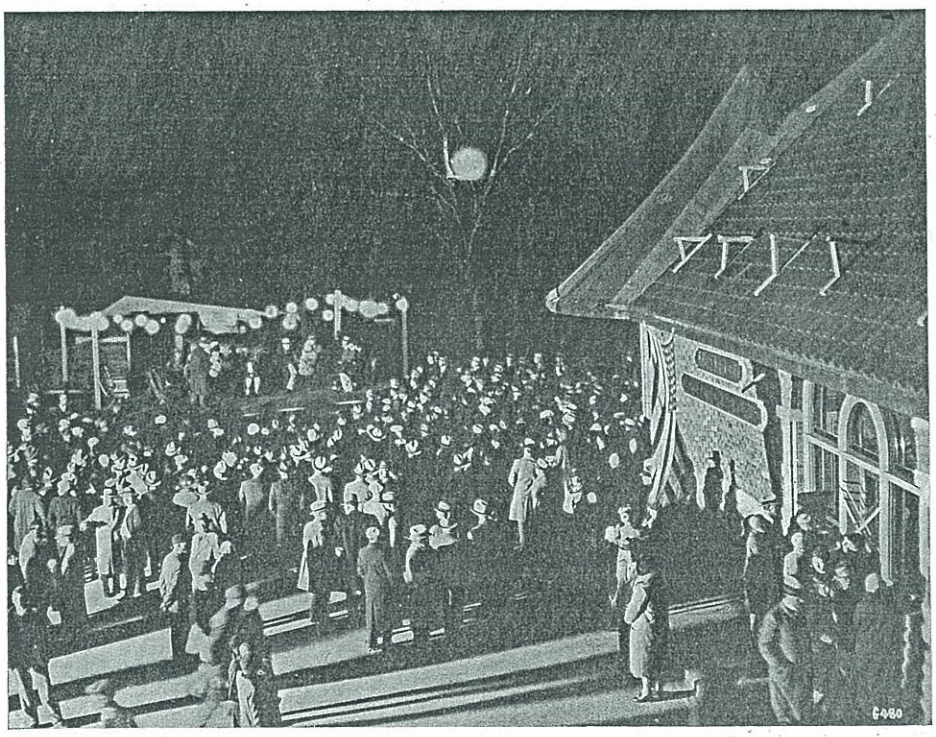
A special feature of the evening was the presence of a train of the regular equipment in use on the day and night runs to Detroit, which was inspected by several thousand people. To many this equipment was a revelation, particularly the Grand Trunk Western parlor lounge car *Muskegon Lake*, which represents the best of any equipment operating out o Muskegon. This proved an excellent metho of acquainting the people of the city with th fine type of service which the Grand Trunk offers them.

The program at the formal opening was unde the able chairmanship of R. H. Browne, Presi dent of the Browne-Morse Company, who als presided at the luncheon tendered by the Greate Muskegon Chamber of Commerce in hono of C. G. Bowker, General Manager, of th Grand Trunk Western Lines, and other official of the railway. The wives of the Grand Trun men were entertained at luncheon and dinne and during the day by Mrs. L. D. MacArthu Mrs. W. G. Crebo, and Mrs. C. H. Cuddeback

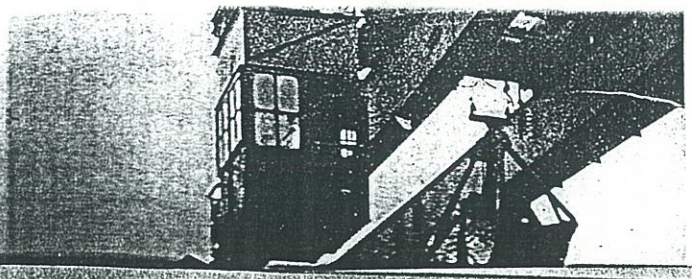
The station was accepted on behalf of th city of Muskegon by Mayor J. Arthur Drat on behalf of the city of Muskegon Heights b City Attorney William J. Balgooyen, represent ing Mayor Herman Bartels; and on behalf of th city of North Muskegon by Mayor Erne Eimer.

A compliment, indicative of the friendly r lations between railway and city, was pai

An historic second when Muskegon's new station wa opened; Miss Roberta Simpson, of Muskegon, an Miss Marjorie Brooker, of Muskegon Heights, who cu the ribbons across the entrance. Miss Simpson i opening the door to admit C. G. Bowker, Genera Manager, Grand Trunk Western Lines.



A section of the crowd, of more than 9,000 cit zens of Greater Muskegon, which attended th opening ceremonies of the new Grand Trun Station. The station was accepted in behalf the district by the mayors of Muskegon, Musk gon Heights and North Muskegon, who, wit other leading residents spoke from the ban stand, shown in the background, and high complimented the railway upon its co-operatio with the three cities, both in their industri development and in providing adequate transpo tation facilities.



made the journey in private automobiles, while approximately 7% would have used busses, a fair indication of the channels into which traffic lost to the railroads has flown.

Lightweight Freight Cars

A considerable proportion of these notes has hitherto been given over to novel design in passenger vehicles and there is evidence that this movement is gaining momentum and that more space will be required to record further departures from what has come to be regarded as the conventional. Now that

MARCH 1935

ACROSS THE BORDER

By C. J. Hanratty

WHATEVER else may be wanting the railroads in these parts need not suffer from lack of advice. The public prints devote a considerable amount of space to the rail carriers, in the news columns, the editorial pages and in that particularly interesting section of the dailies given over to "Letters to the Editor." Taken as a whole, the advice is apt to prove confusing, however well meant, reminding one of that Aesop fable which relates the adventure of the Old Man and his Ass—wonder if Aesop is read today? There are demands for greater speed, and in the same issue somebody else will complain that the trains enter the Chicago gateways too swiftly. There is a curious unanimity among these writers on the subject of passenger fares to the effect that reduced rates would lead to prosperity.

Joseph B. Eastman, transportation co-ordinator, is on the side of lower fares, although in a statement recently issued he noted that passenger services during a year under survey cost the railways of the United States $200,000,000 more than these same lines received from the travelling public. That sounds like a bit of a headache.

Mr. Eastman's report asserts that railway travel was no greater in 1933 than in 1900, and is authority for the statement that "In 1933 travel between cities in private automobiles was ten times as great as in trains, and aggregate travel per capita by all means of transport was four times as great as it was prior to the automotive era." Mr. Eastman's advice to the railroads is to "Anticipate and satisfy essential requirements for safe, clean, comfortable, complete, convenient, speedy and hospitable carriage, intelligently coordinated with city travel facilities."

Maple Leaf Goes Faster

Several trains operating out of Chicago have been speeded up and people in a hurry to travel between Chicago and Milwaukee may do so in 80 minutes over the distance of 85 miles. Schedules to St. Paul and Minneapolis, have been speeded up, and there is information to the effect that in the springtime trains to the coast will operate on a faster time card.

When the issue of the magazine in which this appears is distributed, No. 20 out of Chicago, otherwise "The Maple Leaf", will be operating on an accelerated schedule, shortening the time between Chicago and Toronto by 30 minutes.

As a further result, the through sleepers from Chicago to New York now make a new connection at Hamilton, which enables passengers from Chicago to arrive at their destination at 8.15 a.m. The time of departure at Chicago has been advanced fifteen minutes to 9 a.m., and the net result is a gain of 1 hour, 30 minutes in arrival at New York.

The earlier arrival at Toronto—9.45 p.m., instead of 10.40 p.m., represents a cut of 40 minutes in the time between Chicago and Toronto. The new schedule now makes New York a convenient overnight journey from business centres in Michigan served by the Grand Trunk.

Carry Heavy Mail

Situated at a busy crossroad and being the home of several important mail order houses, a great volume of letters and parcels flow in and out of this city, and the various railways, including the Grand Trunk, render useful service by the transportation of these mails. During each business day at least 50 carloads of parcel post move out of Chicago. During the past year a total of 16,500 carloads of parcel post were delivered by the Postal authorities to the railways, equal to 1,650 trains each of 10 mail cars. It is stated that Chicago leads all cities of the United States in parcel post activities, due to the city's position as a distributing centre. In the busiest day of 1934 the Chicago post office dealt with 12,810,960 letters and 116,751 sacks of parcel post and packets. Evidently all correspondence was answered that day.

A Great Market Basket

Chicago has other claims to usefulness, one being that its storage facilities enable it to become a real market basket.

Conductor W. H. "Bill" C... C. V. Railways.

Cold storage space amounts ... 100 million cubic feet, and the ... warehouses are well equipped ... vide for chilled and cold sto... meats, poultry, eggs, cheese, but... other produce. There is a bi... trade through thi... and in a norma... more than 100,0... loads of fresh fru... handled, which ... quite a lot of work ... railways which tra... them. On the d... was being writte... cago cold storage ... houses held 24 ... pounds of poult... million pounds of ... and 6 million pou... cheese. As an ex... of seasonal fluctua... is interesting to ... that on the same ... day there were in s... 332,000 cases of ... while on August 1 ... the warehouses wer... ing 3,325,000 ca... eggs.

Maintains Fa... in Steam

Despite the addi... new Diesel equip... and statements of f... trains to be add... spring and summer ... fic, the steam eng... not being forced o... the picture, indeed ... sturdy and pictur...

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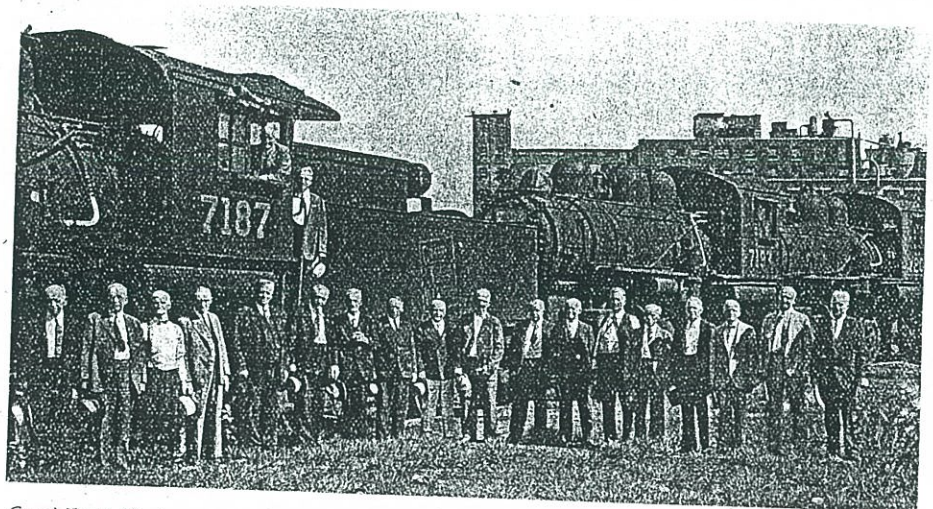

Grand Trunk Western veterans bid farewell to some old locomotives at Battle Creek shops before the old engines are scrapped. Eight of the veterans had been locomotive engineers before retirement. In the cab window is A. E. Duffield and on the steps, Howard Williams. Standing, left to right: Arthur Clark, Joseph Boaz, E. L. Spillane, John Palmer, Edward Hoffman, G. H. Murray, A. M. Dickinson, Mahlon McQuay, W. G. Simpson, D. J. Waters, Alfred Swan, John Parker, H. E. Bailes (now yardmaster and a former engineer), David Peachey, M. H. Seely, D. W. Norwood, Richard Tobin and Joseph McCall. Photo by courtesy of Joseph Nouerr.

G. T. W.—C. V. STAFF ACTIVITIES

Durand, Mich.

DETROIT Division learned with deep regret of the passing of William J. Runyon, of Coopersville, Mich., a faithful employee and a friend of all who knew him.

For forty-four years Mr. Runyon was a telegrapher and agent on the Detroit Division. Beginning at Brent Creek in his twenty-first year, he worked at Flushing and at Bancroft a short time, *then in 1903 went to Coopersville as Agent for twenty-four years. In 1927* at Coopersville. Busy, yes, he was always busy, but ever found time to be a friend to those who needed friendship."

St. Louis, Mo.

R. E. Murphy, passenger representative in the St. Louis office of the Canadian National Railways, was recently elected a vice-president of the Passenger Club of St. Louis.

Central Vermont

as treasurer of the Burlington & Lamoille Railroad, which is now operated as the Essex Jct.-Cambridge Jct. branch line of the Central Vermont.

Snow Trains a Success

Pulling the throttle of the C.V.'s first winter sports special of the 1935 season was Engineer "Paddy" Flynn of Brattleboro. "Paddy" was accompanied in the cab by John Kruger, assistant road foreman of engines.

Central Vermont Railway during month of February.

Pier 29 was Busy

Pier 29 of the Central Ver... Transportation Co. on the East ... New York City, always a busy ... became a veritable beehive of ac... shortly after the S.S. *Lexingto...* Long Island Sound passenger ste... was rammed and sunk in the East ...

Locomotive Giants of the Past

Small When Compared to Mammoth Engines of 6000 and 4100 Types---They Were Rail Aristocrats of Their Time.

THE railroad locomotive has undergone many changes from the days of the ancient wood-burner to the mighty "6000" and "4100" passenger and freight locomotives, now operated by the Canadian National Railways. Perhaps, nothing tells the tale of time's changes more than a series of photographs, such as that in the possession of Mr. W. G. Larmour, now a resident of Norfolk, Virginia, but who served his apprenticeship in the old Fort Gratiot shops, of the Grand Trunk Railway, at Port Huron, in the early nineties. For many years Mr. Larmour made a hobby of collecting pictures and drawings of locomotives, from which collection the accompanying photographs have been selected.

Engine No. 3, "Josephine," was built, at Toronto, for the Ontario, Simcoe and Huron Railway (dubbed the "Oats, Straw and Hay"), afterwards part of the Northern Division of the Grand Trunk. The gauge of this railway was five feet, six inches, and the road extended between Toronto, Barrie and Penetanguishene, through what was then unbroken forest. The antlers above the headlight, shown in the photograph, were taken from a deer killed by the engine. The spherical sand-box is shown on top of the engine. This was an experiment for keeping dry sand on the top of the boiler.

Engine No. 39 was one of the first series of locomotives used by the Grand Trunk. They were built at Birkenhead, England, about 1851, for passenger purposes. They were inside connected, with a single pair of seven-foot driving wheels, and a bogie truck front and rear. This type of engine proved to be speedy and efficient in handling the light trains of that period during the summer time, but their low tractive effort rendered them useless when snow lay on the tracks. Their conversion to four-wheel switchers, as shown in the accompanying photograph, therefore, followed, and two of them were given the names of "Boxer" and "Growler." The latter was stationed at Fort Erie during the time of the Fenian Raid, of 1866, and was used in clearing the yard of rolling stock lest it fall into the hands of the Fenians.

Engine No. 98 was built at the Fort Gratiot, Mich., shops, in 1892, from designs by the late Mr. Herbert Roberts, at that time Mechanical Superintendent of the Chicago and Grand Trunk Railway. It was one of the twelve Class "A" locomotives built by apprentices in the fifth or last year of their apprenticeship, the gang being headed by a chargeman and a few journeymen. The management was proud of these locomotives, for it was a matter of record that they would stay in service about twice as long as a contract-built locomotive of the same design. No. 98 was the only Class "A" built with Vauclain Compound cylinders, the other being simple engines with cylinders 18 inches in diameter by a 24 inch stroke. It is interesting to note that Mr. Larmour worked on these engines as an apprentice.

Engine No. 155 was used in heavy, fast passenger service during the period of the World's Fair and ranked among the heaviest passenger locomotives running into Chicago at that time. Twelve of these engines, C. and G.T., Class "B", were built, in 1893, by the Cooke Locomotive and Machine Company, of Paterson, N.J., from designs by the late Mr. Roberts, Mechanical Superintendent.

Engine No. 209 was built at the Montreal shops, in 1859, and hauled the then Prince of Wales, later King Edward Seventh, on his Canadian tour, in 1860. She was among the first of the "outside connected" locomotives. The photograph shows the forked end of the main road, also the location of the sand box on the running board.

"Evidently," Mr. Larmour writes, they had trouble with sweating sand boxes in the early days, too."

Locomotive 271 is a mushroom stack woodburner, built at Kingston, about 1868-70. These engines had solid forged driving wheel centres and were originally equipped with vacuum brake for passenger service. They held the entire centre of the stage until the advent of the coal burner, when the engineer was forced to abandon his "biled" shirt. The old woodburners were kept spotlessly clean, the records show, but the coal-burning engines brought a change in this respect.

The straight or "peashooter" stack of the later coal-burners did not come into general use until about 1895, according to Mr. Larmour. Engine 416 was one of the diamond stack coal burners, built by the Manchester Locomotive Works, about the year 1878, and commonly known as the "Blood" engine.

When the publishers of a Toronto newspaper sought to place their morning product on the doorsteps of London residents, "before the milkman," they looked to the Grand Trunk Railway to "deliver the goods"

Engine No. 702 was one of the old Great Western Railway stock and it was he particular job to run the "Globe Fa Train" from Toronto to London. Th type originally appeared about 188 and will be remembered by some of th old-timers running on the G.W.R., wit the bell originally on the pilot buffe beam and connected with a trigge operated by the truck wheel, producin a sound of the bell for every revolutio of the wheel. Three locomotives, large than that illustrated but of the same general desig were constructed at Hamilton, about 1888-89, from th designs of Mr. Domville, Mechanical Superintenden These were named "Duchess," "Princess" and "Em press," and were powerful enough to haul a train up th Dundas hill without assistance, which the small locomotives required.

Locomotive No. 6000, queen of the passenger engine has many unique features and represents the finishe product of modern thought in locomotive design. Th engine is of mountain type and is used for hauling th heavy all-steel trains of the Canadian National Syste on the Central and Atlantic regions. The over-all leng of this engine is 90 feet, including the tender, whic is the first one to be built in Canada with 12 wheels, si on each side. The tender carries 17 tons of coal and 10 000 imperial gallons of water. The weight of Engi 6000, with tender, is more than 290 tons; its width l feet, six inches and its tractive power 49,600 pound This makes it about 10 per cent. more powerful than th largest engine previously used in passenger service Canada. The 6000 type engine is equipped with eigh driving wheels, four on each side of 73 inches in diamete its boiler carries 210 pounds pressure to the square inc and its inside diameter is seven feet, six inches, so that man could stand up inside and barely touch the to The engine is equipped with all modern safety devic known to locomotive builders.

The "4100" type of freight locomotives, which as we as the 6000, were constructed at Kingston, marks a ne accomplishment in freight locomotive building. One the spectators who saw the first of the 4100 type referre to it as a "battleship on wheels", this Santa Fe typ locomotive with its 325 tons of steel welded into machine of concentrated power. The 4100 is 92 feet lon 15 feet, 3 inches high, and 10 feet, 8 inches wide. Its boil is 104 inches in diameter and it can develop 3,20 horsepower. It is not only the heaviest engine in th British Empire but is also the largest Santa Fe typ engine in the world. It has ten drive wheels, five o each side, and is equipped with the Booster, whic

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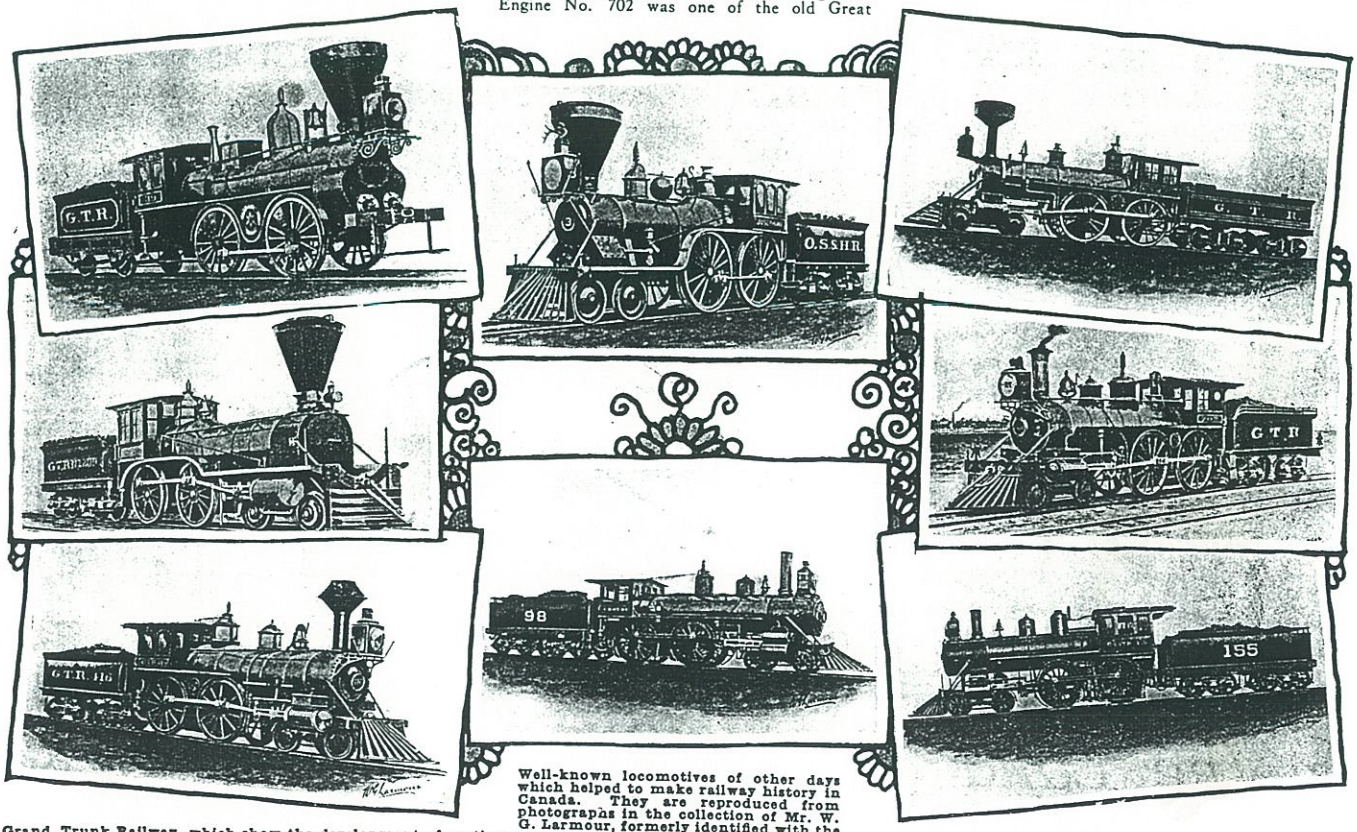
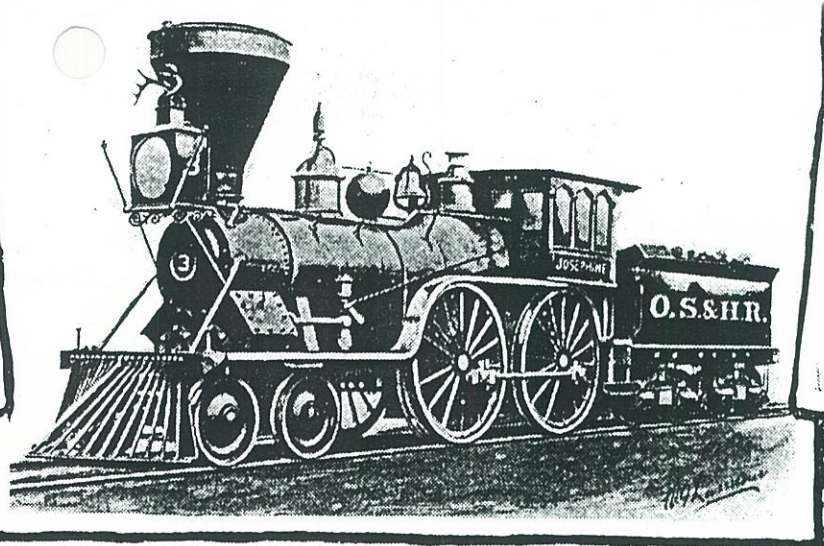
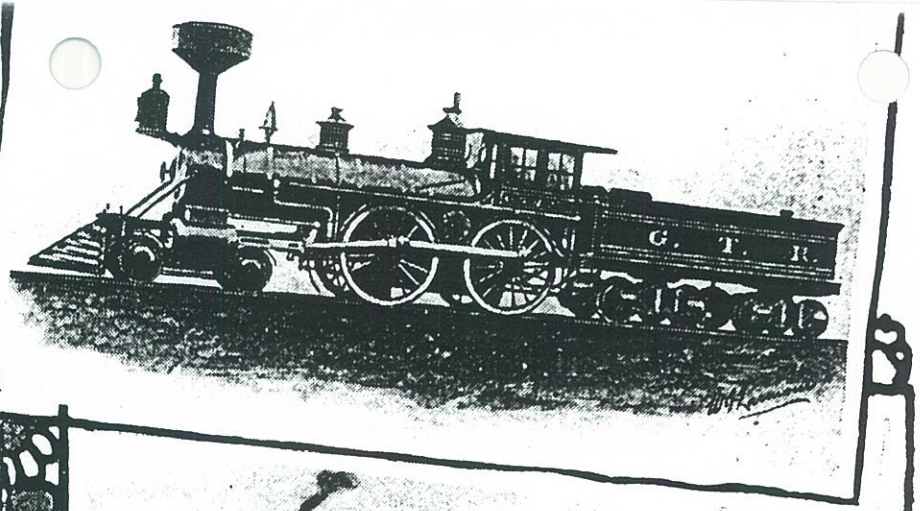
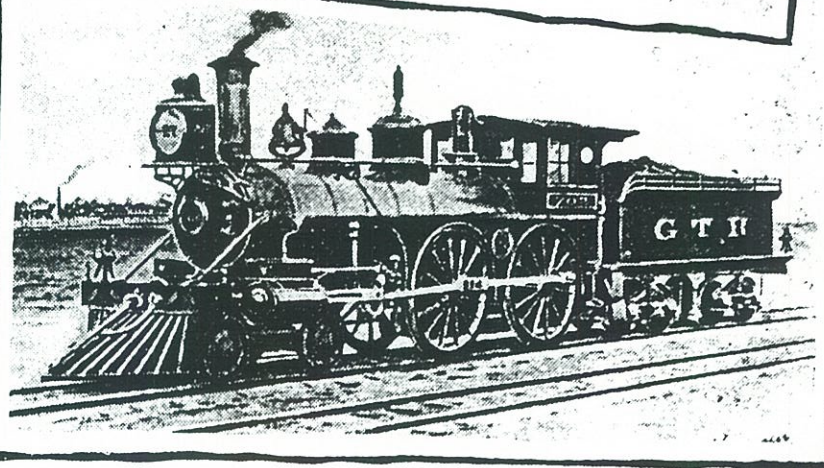
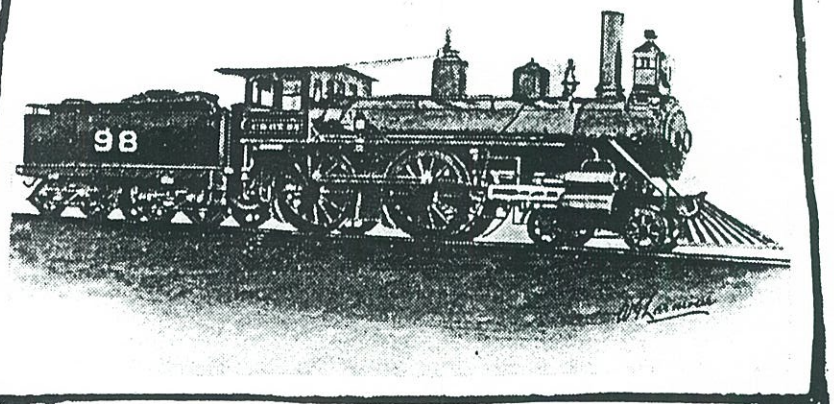


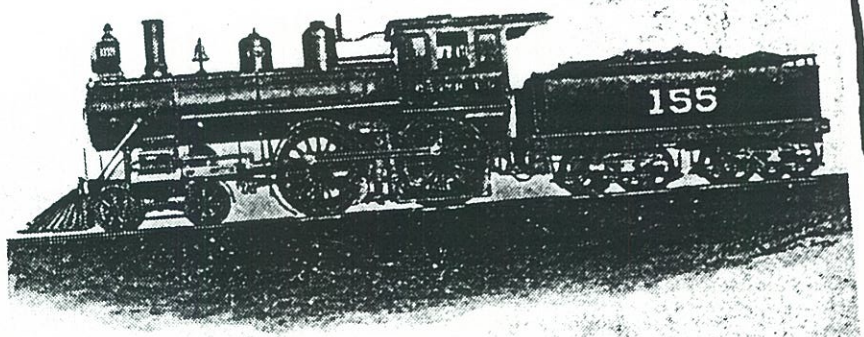
Well-known locomotives of other days which helped to make railway history in Canada. They are reproduced from photographs in the collection of Mr. W. G. Larmour, formerly identified with the Grand Trunk Railway, which show the development of motive power on the North American Continent, and are dealt with in the accompanying article on this page.











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ACROSS THE BORDER

By C. J. HANRATTY

AN INTERESTING development in Chicago and other cities within the area included in the mid-western States is the growth of the travel show. The first substantial organization of this character began three years ago under the auspices of the Chicago *Daily News*, and the second and third international travel expositions sponsored by that journal showed definite advance above the standard set by the original event. The third show, held recently in the exposition quarters of the Stevens Hotel, was a complete success, both in the quality of the exhibits, the attendance and efficiency of management. Great credit is due to Mrs. Lucia Lewis, Editor of the Travel Section of the Chicago *Daily News*, for the admirable manner in which the event was planned and executed. During the four days of the exhibition the attendance steadily progressed until in all, approximately one hundred thousand visitors were counted. For the attention of these visitors ninety-six exhibitors displayed travel wares and invited travel consideration to the well-known, the lesser known and the almost unknown points of interest in this world. Railways to the number of twenty-four were represented, offering modern transportation throughout the continent. This group naturally included the Canadian National-Grand Trunk Railways whose appeals for Jasper National Park, Alaska, the Canadian scene generally, and the West Indies were presented through the medium of an ultra-smart setting, colorful and including a totem pole motif of attractive appearance. That particular display afterwards went on to Philadelphia where the Philadelphia *Record* had established its first similar show.

In addition to the railways of the continent, there was wide representation from the steamship services of the Atlantic and the Pacific, the air lines, highway travel, tourist associations and the widely known travel organizations. To complete the picture, the friendly and useful Travellers' Aid Society set up a booth, and, lest there should be any lack of information on the subject of travel, the Chicago Public Library had a generous display of books calculated to stir any stay-at-home into action and become a world traveller.

Previous to the Chicago show an excellent exposition was put on at Indianapolis,—also the third of its kind,—sponsored by the Association of Indianapolis Bank Travel Bureaux and the Indianapolis *Star*. For this event the arrangements were the responsibility of Hugh F. Dowell, national advertising manager of the *Star*. It was well designed and set up, and attracted a large attendance during three days.

At both shows some of the choice Canadian National films were shown. At Chicago the prize winning "Canadian Western Holiday" was on display and, as usual, attracted keen interest.

Both at Chicago and Indianapolis it was remarked that the visitors asked intelligent questions suggesting that they really were travel-minded. This can be attributed to the great volume of travel publicity and advertising which has been distributed, and the many excellent travel sections which now form features of the chief papers in the principal cities of the country. It is also an indication that more and more people of this country are desirous of setting out to learn something about the people on the other side of the hill, across the borders into Canada and Mexico, into Alaska, the Yukon, Labrador, Newfoundland and even farther afield.

Classifying the Railroads

For the sake of convenience in its reports the Interstate Commerce Commission has classified the 1,470 United States railroads into groups. The Class 1 roads, of which there are 139, according to the latest I.C.C. report, include regular carriers with gross annual revenues of $1,000,000 or more. Of Class 2 roads there are 189 with revenues from $100,000 to $1,000,000. There are Class 3 Roads with revenues of under $100,000 and these number 247. In addition there are 338 lessor companies which are operated under lease to some other road, and 199 proprietory roads whose stock is all owned by operating lines. Other groups in this classification include 246 switching and terminal roads and 80 "circular" roads, that is logging roads and similar enterprises for which brief returns are made occasionally. Of the total, 43 roads each operate 1,000 miles or more. The figures are road miles not track miles. In mileage the list is headed by the Santa Fe, 13,546 miles, followed by the Southern Pacific, 13,190 miles. Then the New York Central, 11,152 miles, the Milwaukee, 10,096 miles and the Pennsylvania, 10,308 miles. The mileage of the Grand Trunk Western Railroad in Illinois, Indiana and Michigan is given as 1,032. The complete railroad group is reported to operate a grand total of 417,710 miles including double track branches, switches and other mileage, forming a substantial factor in an industry of great importance.

Diesel Switchers for Grand Trunk

There was an air of Hollywood about Brush Street terminal, Detroit, on the early afternoon of Thursday, May 5. Technical men were busy setting up strange mechanisms, others were laying cable, microphones were being installed at varying levels, photographers were present in numbers and there was a background of railwaymen and citizens generally to form what may truly be termed a large gathering. Presently the cause of all this hove in sight on tracks Nos. 1 and 2 in the form of two locomotives, but locomotives quite different in character from those usually seen at the Brush Street Station of the Grand Trunk Western. Not only were they different in appearance, but also different in color, having risen to the dignity of a "scheme" in which black and silver predominated with the insignia of the Grand Trunk in red and gold on each side of the cab, all smart and trim. These two locomotives were about to be taken over officially, and as they were the first of their type to be used on a public railroad in Michigan, the event was deemed worthy of public notice and was placed on the day's programme of Station WXYZ, Detroit, for a fifteen minutes' description of the simple ceremony, and an explanation of the details and purposes of these locomotives.

C. G. Bowker, vice-president and general manager of the Grand Trunk Western, was present to "introduce" the Diesels after they had moved down the tracks. Their arrival was broadcast with real "effects," including the operating purr, bell and horn. With Mr. Bowker was R. K. Evans, vice-president of the Electro-Motive Corporation, a subsidiary of General Motors Corporation, and manufacturers of Diesel equipment at their plant at LaGrange, Illinois, which is within the Chicago industrial area. Other Grand Trunk officials present included: J. A. Clancey, general superintendent of transportation; P. D. Fitzpatrick, chief engineer; E. F. Gorman, Detroit superintendent; George E. Murray, electrical and mechanical engineer, Battle Creek; Harry Smith, general foreman motive power department, Detroit; E. F. MacGregor, instructor of enginemen; C. A. Skog, general freight agent, Detroit; W. H. Edmondson, assistant to the vice-president, and other technical, operating and traffic representatives.

With Harold True, of Station WXYZ, acting as Master of Ceremonies, the broadcast proved to be a snappy performance. After Mr. Bowker had explained the purposes of these locomotives and their advantages, Mr. Murray followed with a description of the switchers and their intimate details told in popular terms. The term "intimate details" is used advisedly because it is possible by opening a series of doors along the sides of the locomotives to inspect quickly the engine and the mechanism which is the heart of the locomotive. As one bystander remarked: "It's just like opening the kitchen cupboards."

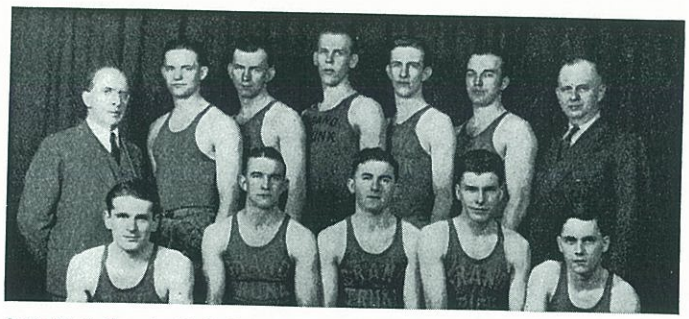
Mr. Bowker told the radio audience that these locomotives had been purchased because the Grand Trunk is always ready to accept new developments that will improve service in an economical manner. This type has safety features and has a high record of availability with reduced fuel costs.

These locomotives are powered by 600 HP. General Motors' 2-cycle Diesel engine, the latter driving a generator that in turn supplies power to traction motors on each of the four axles. These engines are of the same type used to power the main line locomotives of the streamlined passenger trains. The switchers are capable of doing 55 miles per hour without a load, but work and not speed is their purpose, and it is estimated that they can perform better than some types of equipment rated as high as 2,000 HP.

Other details of these locomotives are: a water capacity of 150 gallons for the cooling system, 55 gallons of lubricating oil, 600 gallons of fuel oil which will provide for operation during six days each of 24 hours.

The arrangements for the engine crew are excellent in convenience and comfort with ample room, wide visibility, safety glass, windshield wipers, and simple operation at the control pedestal. Seats are cushioned in rubber sponge leather, covered. There is even a natural finish hardwood floor. The cab is insulated, the windows may be opened, and for winter operation there has been installed a large automotive type fan-driven hot water heater.

These new model locomotives represent another chapter in the pioneer-



Battle Creek Championship Basketball team: Standing, left to right:—A. L. Olsen, President, Battle Creek Grand Trunk Western Recreation Association; John Skerlic, Daniel Wood, Gordon TenBrink, Charles Van Buskirk, Andrew Maturen and Jess Coleman, Coach. Front row, left to right:—William Senchak, James Hildreth, John McBride, Fred Duncan and Harrison Baker. In addition to retaining the Grand Trunk Western Railroad championship which it has held for several years, this team in 1938 won the Battle Creek City championship for the eighth time, six of these occasions being under the coaching and management of Jess Coleman. Furthermore, in 1938 the Battle Creek team won the Western Michigan A.A.U. Championship; the Central Michigan Amateur Invitational Tournament at Lansing; and the State of Michigan Recreational Championship. In making this record the Grand Trunk Western team beat the best teams in Michigan and Indiana and was classified by the sports writers as the best basketball team in that part of the country. In the season the team won 40 games and suffered but eight defeats. They finished with an unbroken string of victories and from February 6 to the end of the season April 9, at Montreal, they lost only one game while winning 27. In 48 games the team scored 1,700 points, an average offensive of slightly better than 35 points per game. After winning their championship honors the team made a quick trip to Canada, playing at Toronto and Montreal.

Here are the members of the Port Huron, Michigan, Bowling Team which won the championship at the Grand Trunk Western Railroad Recreation Association's tournament held in South Bend, Indiana. Port Huron toppled 5,480 pins to capture the title. From left to right the champion trundlers are: D. Archibald, G. Schmude, J. Robertson, A. Geougeon, M. O'Rourke. The sixth man holding the trophy is V. Sloat. As reported in a previous issue eight teams participated. The top average for individuals was won by Sattler, of Elsdon (Chicago), who in six games rolled 1202 pins for an average of 200.2. O'Rourke of the winning Port Huron team, rolled 1159 pins for an average of 193.1 for second place just nosing out Lognonec, of Battle Creek, who rolled 1146 for an average of 191.

ing and experimental work done by the Canadian National System beginning with the first Diesel unit to perform a trans-continental journey, the Diesel-Electric locomotive for main line traffic and other similar equipment now in service.

Changes in Chicago

Chicago: Richard Joseph Eberhardt has been appointed city passenger agent in succession to the late George North. Mr. Eberhardt, more familiarly known as "Dick," is a native of Cincinnati, Ohio. He joined the company service at Cincinnati, June 1, 1924 as a passenger traffic representative. On June 15, 1927 he was appointed passenger agent. On June 15, 1931 he was transferred to the Detroit office as travelling passenger agent. On January 1, 1932 Mr. Eberhardt was transferred to Chicago in a similar capacity and continued in that position until his recent promotion which was effective May 1st.

Consequent to this advance, other changes which followed brought about the promotion of Harold J. Schneider as travelling passenger agent; C. L. Nelson to acting chief clerk; L. W. Gates as ticket stock clerk and H. A. Evenson as advertising clerk.

Fish Story No. 1

Detroit: This was such a good story that it "made" the news pages of the Detroit *News* complete with photograph. Here it is as snipped from the *News* without embellishment. Under the photograph of a man's sized fish the caption reads: "Here is the evidence for the top fish story of the season—so far. This muskellunge was caught in the Detroit River off the foot of Brush Street—the Grand Trunk Western Railroad Dock—A Grand Trunk construction man saw the fish swimming off the dock. He stunned it with a rock and then picked it out of the water with a post-hole digger." The photograph shows R. A. Geavelle, division engineer, measuring the fish which weighed 24 pounds and measured 48 inches from stem to stern.

Railway Business Women

Detroit: At the annual meeting of the Railway Business Women's Association, Mary O'Brien, of the Grand Trunk Western, was chosen as president for a second term. Rachel McKellar, also of the Grand Trunk staff, was elected recording secretary of the association.

Chicago Passenger Men Get Together

Chicago: For the third annual get together meeting of all railroad passenger traffic department representatives, more than 900 individuals crowded the Terrace Casino of the Morrison Hotel. On this occasion the boys were joined by quite a representation of railroad women, some of whom in the Chicago area hold responsible positions. It was a happy gathering and the fun was increased by community singing and helped along by individual effort, while two skits in which the "actors" were well-known traffic officials further added to the interest and the gaiety. A stirring address was delivered by Ralph Budd, president of the Chicago, Burlington and Quincy Railroad, who found that the railways were well abreast of the times, despite their critics. Guests at the speakers' table included A. A. Gardiner, assistant general passenger traffic manager, Canadian National Railways, Montreal; and A. B. Chown, passenger traffic manager, Grand Trunk Railway, Chicago. The general committee on arrangements included A. H. Davis, general western passenger agent, Grand Trunk Railway, Chicago.

Detroit Boys Like Railways

Detroit: Reference has been made from time to time in these columns of the organized visits of schoolboys and Boy Scouts to the terminal facilities at Detroit and Windsor. Numerous groups of this character have travelled by train from suburban points to Brush Street Station. There they have been shown the details of passenger equipment including air-conditioning mechanism and have also been made acquainted with some of the operating activities. Such organized trips also include a trip on the car ferry operating between Detroit and Windsor. At Windsor there is usually an opportunity to see big power, and to any normal boy, what can afford greater joy than the privilege of climbing into the cab of a locomotive, asking questions and receiving the proper answers? The most recent inspection of this character was made by a group of students from the Science Class of Highland Park Junior High School in charge of their instructor, M. A. Russell, and accompanied by Ross H. Smith, principal of the school. Afterwards Principal Smith wrote to H. L. McCaughey, general agent, passenger department, Detroit, in these terms: "I have no hesitancy in saying that I believe this trip was the most instructive that any of our classes has taken. We were most cordially received and conducted on our tour by your city passenger agent, Mr. A. C. L. Warner, and the conductor of our tour, Mr. J. Cornwell, coach foreman. We certainly owe a lot to these gentlemen and to your organization for a very interesting and instructive organization."

Telling the world via WXYZ the technical features of the new Diesel locomotives. Left to right: Hans L. Carlson, a locomotive engineer of twenty-five years' service, talks into the portable microphone held by Harold True, announcer, while the onlooker who had completed a fine description of the new power is George E. Murray, Electrical and Mechanical Engineer, GTW, at Battle Creek, Michigan, where the company's locomotive shops are situated.—(Photographs by C. W. McGill, Detroit, Michigan.)

Death of C. A. McNutt

South Bend, Indiana: Following a brief illness due to a heart attack, death came to Claude Alexander McNutt, passenger agent. Mr. McNutt was born February 7, 1872 in Climax Township, Kalamazoo County, Michigan. His first introduction to the service came on September 1, 1888 when he began as extra operator and in that capacity served at Edwardsburg, Maynard and Griffith. In December of the same year he was appointed operator, taking a trick at Charlotte. On March 17, 1891 he was transferred to Lansing and on July 6, 1897, moved to Chicago and took up the duties of ticket clerk in the City Ticket Office. Ten years later he returned to his first occupation and again became an operator at Lansing, and on November 1, 1897, took the position of operator and ticket agent in the old station at South Bend. On February 1, 1906, Mr. McNutt was appointed passenger agent at South Bend, which position he maintained up to the time of his death. He was thus in the 50th year of active service, and of that total, almost 41 years had been spent in South Bend. He was a conscientious worker, pleasant alike to his associates and the public, and he numbered many friends in the city wherein he had worked so long. Mrs. McNutt had predeceased her husband, and her death had greatly affected him.

At the service held at South Bend there were present: W. J. Hogan, superintendent, Battle Creek; M. A. O'Brien, general agent, freight department, South Bend; C. H. Pelton, passenger department, Chicago; W. G. Crabill, attorney, South Bend; R. J. Eberhardt and A. M. Nolan, travelling passenger agents, Chicago; A. D. McKnight, retired agent; L. L. Thompson, agent, South Bend; B. S. Jack, ticket agent, Port Huron; G. MacDonald, ticket agent, Battle Creek; C. Hayman, agent, dining car department, Battle Creek; Francis Brown, freight agent, Kalamazoo; B. A. Deegan, TPA, NYC System, Chicago; J. T. Hagerty, ticket agent, NYC, South Bend; M. O. Pratt, chief clerk, NYC ticket office, South Bend; C. T. Rockhill, ticket seller, NYC, South Bend; J. B. Sthal, L. C. Bingaman, ticket agents, Battle Creek; J. C. Rausch, C. R. Blodgett; J. C. Barney, F. A. Love, H. J. Thomas, Charles Bailey, L. J. Wigenka, Charles Dannerbuger, William Connelly, Paul Salzman and many others.

Table Tennis Tournament

Detroit: The Grand Trunk Western's first annual Tournament was held in Detroit April 2nd and 3rd, with players from Chicago, Battle Creek and Detroit taking part. Art Atherton, of Detroit, won the singles championship, defeating Charlie Terroux three straight games. He had very stiff opposition in the lower brackets with scores of 21-19, 22-20, and 21-19 with Dave Mair in the quarter-finals, and similar scores against Leo Humphrey in the semi-finals. To reach the finals Terroux had to beat Topel in the quarter-finals and Gifford in the semi-finals, which he did after some very interesting games.

The Doubles Championship was won by Black and Atherton of Detroit, who defeated Terroux and Humphrey in the finals. Humphrey and Terroux had been seeded No. 1 in the Tournament.

Trophies were awarded to the winners and runner-up in each event.

Players entered were as follows: *Chicago*: Topel, Gifford, Doherty, Kokes; *Battle Creek*: Begg, Corey; *Detroit*: Hammond, Beaton, Gravelle, Finlay, Black, Atherton, Szymacha, Krienbring, Mair, Saydak, Humphrey, Terroux, Markham, Williams, Kantor, Christian, Winski.

Wedding at Chicago

On the eve of his wedding to Miss Louise Saladina, Zorn A. Brands, clerk in the general freight department, West Adams Street, was the recipient of a gift from his associates. The presentation was made by O. B. DuRand, general agent, freight department. Mr. Brands is a nephew of George Zorn, traffic manager of the important retail and mail order concern, Sears Roebuck Company.

Welcome to German Railwaymen

Chicago: As the delegation representing the German State Railways following their visit to Canada were *en route* on The International Limited travelling towards Chicago, C. G. Bowker, vice-president and general manager of the Grand Trunk Western, wiring from his headquarters in Detroit, Michigan, sent the following message of welcome:

Dr. H. Prins:—Wuensche ihneu und ihren gaesten eine angenehme Zeit ueber unsere einsenbahn und eine froehliche underhaltung in unserem land.

Translated the message reads: Wishing yourself and your associates a pleasant journey over our railroad and an enjoyable stay in our country.

The distinguished visitors during their travels on the Canadian National and Grand Trunk Railways were accompanied by A. A. Gardiner, assistant general passenger traffic manager, Montreal. On arrival at Chicago they were welcomed by A. B. Chown, passenger traffic manager, Chicago.

Buffalo, N.Y.

Buffalo, N.Y.: John M. Maloney, son of general freight agent and Mrs. John V. Maloney, a Junior at Georgetown Law School, Washington, D.C., has been elected Chancellor of the Pierce Butler Law Club of the University. Mr. Maloney also won the annual extemporaneous speaking contest of the school and at the annual dinner of the Law School held at the Mayflower Hotel in Washington, D.C., was presented with a copy of "The New Despotism" with the compliments of the author Rt. Hon. Lord Hewart, Chief Justice of England, by Associate Justice Pierce Butler of the Supreme Court of the United States, guest of honor and principal speaker.

Mr. Maloney received his A.B. Degree from Notre Dame University, School of Arts and Letters in June, 1936 and in his Senior year there, was President of the Buffalso Campus Club and a Director of Student Activities Council of the University.

SKIING IN SUMMER

Skiing in mid July and August on the snow covered slopes of the Columbia Icefield has been cited as added attraction to members of the Alpine Club of Canada who will hold their annual climb in Jasper National Park this year. Speaking at the annual banquet of the Calgary section of the club, Captain E. R. Gibson of Edmonton told of vast ski lands now easily accessible and where snow conditions will be suitable even in mid-summer. He pointed out that approach to such mountains as Columbia, Snow Dome and other of the famous peaks in the vicinity from the proposed 1938 camp could be made on skis. The Club's annual camp will have its headquarters at the foot of Mt. Athabaska, July 16 to 30, with a high altitude camp to be established at 10,000 feet on the main Columbia Icefield from where ascents of peaks of more than 12,000 feet are to be attempted. The new motor highway from Jasper will make the 1938 camp location very accessible by car from the village and the Lodge.

tion foreman Wm. Hackett, Barnaby River, by superintendent Gibault a short time ago, also to Mrs. John Burns, widow of retired section foreman, Rogersville.

The C.N.R. Tennis Club opened the summer season on Saturday, May 28th. The membership is expected to be quite large as the summer advances.

Sympathy is extended to brakeman F. R. and Mrs. England, Campbellton, in the death of their daughter, Miss Winona England, which occurred at the River Glade Sanitarium a short time ago. This makes the second death in the England family in the last two months, a son, Douglas England, having passed away in March.

Assistant superintendent J. S. Gordon has been elected president of the Restigouche Golf and Country Club, Campbellton, for the second term. Division engineer G. W. H. Perley was also elected a director of the same club.

Miss Florence Jamieson, R.N., daughter of engineman S. H. Jamieson, Campbellton, is to be married in Miami shortly to Dr. Lyons. They will live in Nassau, The Bahamas, where Dr. Lyons is on the staff of a hospital.

Sgt. Paul M. Gibault, of Vancouver, B.C., who has been chosen as a member of the Bisley Team, is a nephew of superintendent J. E. Gibault, of the Campbellton division. He belongs to the Duke of Connaught's Own Rifles.

Bert Pickerem, train baggageman, Halifax, has been laid up due to illness.

Mrs. Caroline McKinnon, matron at Truro station, has been absent from duty on account of illness.

Everett S. Steeves, carpenter, Moncton shops, and Mrs. Steeves were the recipients of many congratulations on the occasion of their thirtieth wedding anniversary.

On Highway Competition

Speaking before representatives of the Federated Trades in the Labor Temple in Moncton recently, E. M. Sherwood, Special Representative, Atlantic Region, dealt with the problem of highway competition. Today, he said, the railways haul a ton of freight a mile at an average charge of about one cent, which is about twenty per cent. less than they got fifteen years ago and which represents lower rates and consequent savings for the shipper and the consumer. Freight train schedules have been speeded up and millions of dollars have been spent in improvements and new equipment, and the amount paid annually in the Maritimes alone for wages, fuel and taxes exceeds $15,000,000.

Mr. Sherwood pointed out the great service rendered to the various communities by the railway, drawing attention to the tribute paid in the press to the railways for the service rendered to the public during the floods in the United States in 1936 and also to the maintaining of services during severe winter storms by means of which homes are kept warm, families fed and factories kept running.

He referred to the various forms of competition which the railways have to meet, including pipe lines and water transportation, in addition to highway transport. $770,000,000., he stated, have been spent in Canada in improvements to water transport, such as canals and harbors, and over $500,000,000. have been expended on highways. He drew attention to the fact that in other countries, England, Ireland, France, Germany, Austria, South Africa, Australia, New Zealand, and the United States, highway transport is regulated so that both the railways and the public are reasonably protected and he stressed the need in Canada for more complete regulations governing all forms of transport and their rigid enforcement.

Rheingold Express

The Rheingold Express running in connection with the night service from London, has been accelerated by 1¼ hours on its outward run from the Hook of Holland through the Rhine Valley by daylight to Basle, and by no less than 3 hours on its return journey.

The German Railways are increasing the number of their Diesel Express Railcars, and the new services will include among others Hamburg-Karlsruhe.

Silver Dragon

A new type of driving car is now being tried out on the German Railways. It is the invention of a Hanover engineer Herr Kruchenberg, who attracted attention some time ago by another innovation, the "Railroad Zepp," a vehicle driven on the permanent way with a propeller.

The glittering sheen of the chassis and the unusual shape of the new car have earned it the name of "The Silver Dragon." It is 210 feet long and rests on four mobile undercarriages. Its two 600 h.p. Diesel engines enable a speed of some 122 miles per hour to be attained. The train is built of light aluminium and, despite its dimensions, weighs only 125 tons. It carries 100 comfortable seats for passengers, as well as supplementary fold-up seats between.

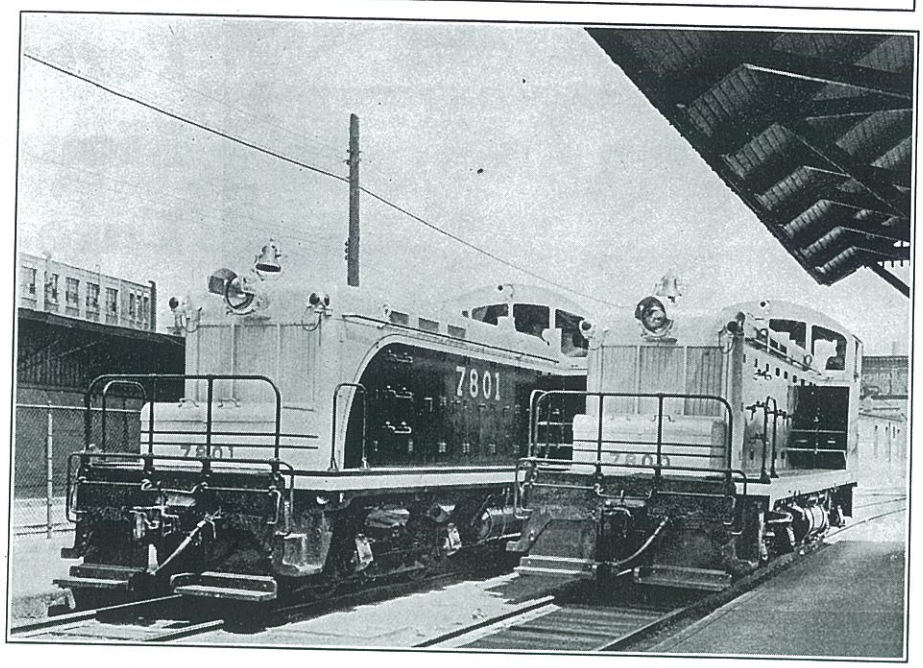
Airliners Change World

"Scientific developments are accelerating as the knowledge already gained accumulates," said Richard C. Gazley, speaking at a Rotary Club meeting in the United States on air transport progress. "The pace is so breath-taking that the scientific marvels of today are obsolete tomorrow. We continue to fly higher, faster and farther, more comfortably, more frequently, and more safely.

"And the sociological potentialities are truly of the greatest possible significance. Think of the misunderstandings and petty differences which will disappear when the people of the world awake to this opportunity of bringing foreign countries as close as the next town is now. Foreign countries will, in effect, no longer be foreign. They will be familiar and thereby friendly.

"I tell you gentlemen, you have at your service a wonderful instrumentality for changing for the better the living and thinking habits of the world."

DIESEL SWITCHERS FOR DETROIT



The two Diesel switchers at Detroit. The photograph is published through the courtesy of the Grand Trunk Employees Year Book, F. W. Oeffinger, editor.

By JOHN ROBERTS

Chief of Motive Power and Car Equipment

THE Canadian National Railways have again entered the Diesel field by purchasing two modern switch engines for service in passenger and freight yards at Detroit, Michigan, on the Grand Trunk Western. This purchase was made from Montreal as a result of a careful traffic and economic study and the locomotives were placed in service during the first week in May.

These switchers are modern representatives of a new type on the Canadian National Railways. They were built by the Electro-Motive Division of the General Motors Corporation in La Grange, Illinois, the Diesel engines being similar to those used in many of the high speed streamline passenger trains with which our readers are familiar.

The feature of the principal interest to the mechanical and operating staffs of these railways is the fact that these two switchers are the first on the Canadian National to use the two stroke cycle Diesel engine instead of the four stroke cycle which is in use in all our other Diesel locomotives and rail cars.

The power plant consists of a 600 H.P., 8 cylinder, 8" x 10", vee type, two cycle Diesel engine, running at 750 r.p.m., directly connected through a flexible coupling to a direct current generator which supplies traction power to four motors geared to the four driving axles. The 600 H.P. rating is for traction, as the power necessary for the auxiliaries is taken from the engine in addition to this rating.

The engine is covered by a bonnet having large panel doors on both sides affording free access to all parts. The operating cab is of ample size and with very good visibility in all directions. The locomotives are of very pleasing design and finish, a new feature of the latter being the use of the aluminum and gold painting. Besides the pleasing appearance it is felt that special painting will be an incentive to greater cleanliness, which in turn will result in less mechanical maintenance.

A special feature of the design of the trucks of these switchers is an exclusive EMC Satco lined end-thrust arrangement to protect the axle journal bearings.

The particular advantage of the Diesel switchers in Detroit is that owing to their ability to work into the buildings of the automobile manufacturing plants the former necessity of using idler cars when switching with steam will be eliminated, thereby materially increasing the speed and convenience of these switching operatings. Another advantage of these engines, which is common to all Diesel switchers, is that they can stay out of the roundhouse almost continuously for a month at a time and attain a very high percentage of availability. This is due to the large quantity of fuel carried on the switcher and the ease with which fueling operatings can be performed. There is no necessity to stop work to take on water or clean fires and the daily and weekly inspections can in many cases be made without loss of time.

The following table shows the principal dimensions and weights:—

GENERAL DIMENSIONS:

Track gauge	4' 8½"
Length over coupler pulling faces	43' 7½"
Width over side sills	10' 0"
Maximum height above rail	14' 5"
Platform height above rail	4' 7½"
Height of cab floor above rail	6' 10"
Length of operator's cab	6' 6"
Width of operator's cab	9' 11"
Height of power plant hood roof above rail	11' 4"
Width of power plant compartment	6' 6"
Wheelbase—truck	8' 0"
Truck centers	22' 0"
Number of drivers	4 pairs
Diameter of drivers	40"
Size of journals	6½"x 12"
Minimum curve radius	100' 0"

SPEED:

Maximum permissible speed	40 m.p.h.

WEIGHTS (approx.):

Total weight (in working order)	200,000 lbs.
Weight on drivers	200,000 lbs.
Journal load per driving axle	44,100 lbs.

CAPACITY:

Starting T.E. at 25% adhesion	50,000 lbs.
Starting T.E. at 30% adhesion	60,000 lbs.

ACROSS THE BORDER

By C. J. HANRATTY

OWOSSO, a thriving city in Michigan, served by the Ann Arbor and the Michigan Grand Trunk Western, the Central Railroads, produced an original idea and carried it into effect on May 25th by staging "Railroad Appreciation Day." The programme of the occasion announced that under the auspices of the Chamber of Commerce, the Rotary and Kiwanis Clubs, the community joined in "A get-together to Railroad Officials and employees with Owosso businessmen and their associates to show our regard for the steam lines that serve our city and the men who work on them. Let Good Fellowship Reign."

Blessed by a fine day, the proceedings began at 8 a.m. when Barbara Scarlet, a High School pupil, topping her fine head with an engineman's cap and wearing the denim jacket that marks the craft, clambered into the cab of a standing locomotive, sounded a blast on its siren to be promptly answered by all available sirens and whistles in Owosso, thus announcing the start of Railroad Day.

The lines serving the community placed on exhibition power and other material and executive and other officials travelled to the city to join in the programme.

For the Grand Trunk Western, Harold Lane came from Battle Creek, with a fine model of a locomotive which was set up in the foyer of the Owosso Hotel. Mr. Lane is a patient man but he certainly was a relieved one when the day ended and he retained the model whole and entire, or almost so, just a few odds and ends having been captured by the souvenir hunters. The boys came in legion and they had a grand time inspecting this and that and endeavoring to discover what did make the wheels go round. Mr. Lane is willing to believe that every boy in Owosso saw the model and by now should be well acquainted with the details of big power on the Grand Trunk Western.

To climax the day's festivities a fine dinner was served in the auditorium of St. Paul's School, and that deserves special mention because it was cooked and served in the best community style, not a professional touch from kitchen to table. Readers who were not present have the assurance of this correspondent that the "Roast Farmer Peet's Pride Ham with Bowker Sauce," deserved the *Cordon Bleu*, while the "Clancey Olives" were of an especial emerald hue. The service was in charge of the ladies of Owosso assisted by the young ladies of the High Schools and their performance rated high with the guests.

The music for the dinner was furnished by the Grand Trunk Western Orchestra, a group of enthusiasts from Headquarters in Detroit, admirably directed by Carl Brayton.

The guests included management, staff, representatives of the Brotherhoods and other railway labor organizations and citizens generally. The principal speaker at the dinner was Samuel O. Dunn, of the *Railway Age*, Chicago, who stressed the problems of the moment as they affect the railroad industry. C. G. Bowker, vice president and general manager, Detroit, spoke for the Grand Trunk; J. L. McKee, vice president and general manager for the Michigan Central, and Victor Parvin, superintendent, for the Ann Arbor. Grand Trunk representatives present were J. A. Clancey, general superintendent of transportation, Detroit; D. M. Crawford, assistant general freight agent, Detroit; W. Vyn, division freight agent, Grand Rapids; H. L. McCaughey, general agent, passenger department, Detroit; and John Marshall, agent, Owosso.

All About a Train Journey

Members of the Business Training Classes and the Commercial Club of East Detroit, Michigan High School joined recently in visiting the passenger facilities of the Grand Trunk-Canadian National Railways at Brush Street Station, and then proceeded by ferry to Windsor, Ontario, there to inspect big power and other equipment. The purpose of the visit, as of previous visits by other Detroit and suburban schools previously recorded in these columns, was practical inasmuch as it enabled the scholars to obtain a well defined impression of salient features of modern transportation. In many instances, boys and girls from these schools had no first hand experience of a railway journey. With the new knowledge of passenger equipment the scholars were also enabled to obtain information regarding the part played by railroads in the everyday life of the communities in which they live.

The pupils of East Detroit High School placed their impressions on paper in a presentable neatly mimeographed folio of 42 pages business letter size. The front cover bore the twin trade marks of the Grand Trunk Railway System and the Canadian National Railways drawn neatly by pen, each tilted at its proper angle. Then the title: "The Story of a Train Trip," an acknowledgment to the railways; mention of J. W. Cornwell, passenger coach yard foreman at Detroit, as "Tour Conductor," and of Messrs. Carroll Bratt and Jason Day "Instructors." The roster of pupils who participated in the trip numbered 66, and of these 59 contributed to the symposium. The girls appeared to be the more prolific writers, two of them contributing their impressions in verse, while two others provided pen sketches to illustrate special points. The boys were impressed by mechanical features, the "6400" Class locomotive seen at Windsor, the car ferry and the turntable. The girls described the comfort features of passenger equipment, the making up of berths, sleeping cars, the lounge and the dining car kitchen. One got the spirit of the parlor car and after describing its features added: "I wouldn't mind travelling for days if I could sit in the parlor car."

Many of the writers expressed appreciation of those who provided guidance and explanation, particularly Mr. Cornwell. There were also kind words for the Immigration and Customs officers, and one girl devoted her space to "The Canadian Police Officer" who was "real nice."

Some of the stories provide another example of the difficulty of obtaining unanimous opinion regarding experiences, a difficulty frequently encountered among witnesses in court. At Windsor, the scholars inspected a Canadian National dining car making ready for the road. They saw the table set, viewed cutlery, silverware and napery then visited pantry and kitchen. There was something in preparation on the range. One observer described it as "roast duck with apple sauce," another sniffed and wrote that the kitchen was "very flavory with chicken pie;" a third variant was: "the chefs were making chicken soup, and did it smell good!!!" The next girl viewed the same kitchen and wrote: "we saw goose heads boiling." A fifth reported that "the Chef took out three nice roasted ducks." One more described the event thus: "the duck heads the cook was cooking." All of which goes to prove that magic is wrought in those dining car kitchens.

There was no doubt at all that all of the young travellers were enthusiastic regarding their experiences. The principal features of the outing were well described in verse by Dorothy Nowack who entitled her offering "Excursion" and terminated in this manner:

"I'm awfully glad I took the trip
I know the rest are too.
I learned a lot and saw a lot,
And enjoyed it, didn't you?"

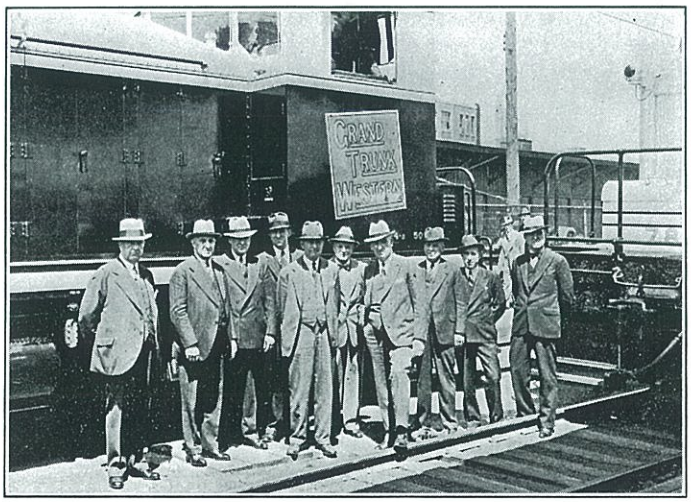


Photo courtesy Grand Trunk Employees Year Book.

Grand Trunk officers inspecting the new Diesel switchers at Detroit. Left to right: C. G. Bowker, Vice-President and General Manager; F. P. Sisson, Office Engineer; C. A. Skog, General Freight Agent; W. H. Edmondson, Office Assistant to Vice-President and General Manager; J. A. Heaman, Office Engineer (C.N.R.); G. E. Murray, Electrical and Mechanical Engineer; J. A. Clancey, General Superintendent Transportation; P. D. Fitzpatrick, Chief Engineer; J. Walton, Chief Clerk, Motive Power Department; E. F. Gorman, Terminal Superintendent.

"Shorty" Slagle Retires

HARRY SLAGLE

Harry "Shorty" Slagle, the genial division lineman of Valparaiso, Indiana, "hung up" his spurs and retired on pension, on May 14.

Mr. Slagle started to work for the Grand Trunk in the Stores Department at Valparaiso, Indiana, in July, 1913. He was promoted to foreman in 1914 and held that position until August, 1916, when he left the service of the Railroad Company and obtained employment with the Hall Signal Company. In January, 1923, he again entered the service of the Railroad Company as division lineman at Valparaiso, which position he held until the date of his retirement.

The employees on "Shorty's" division, which ran from Chicago, Illinois, to Wellsboro, Indiana, will surely miss his hearty welcomes, his generous friendship and his good-natured humor. It is hoped that he will be able to pay them a visit from time to time.

In commenting on Mr. Slagle's retirement, Mr. J. B. MacGregor, superintendent of Railway Telegraph Service, remarked: "Shorty has been a capable and efficient employee and has always shown a splendid spirit of cooperation. We will miss him."

Carter Pratt who has been employed by the company for the past ten years, has been appointed division lineman at Valparaiso in succession to Mr. Slagle.

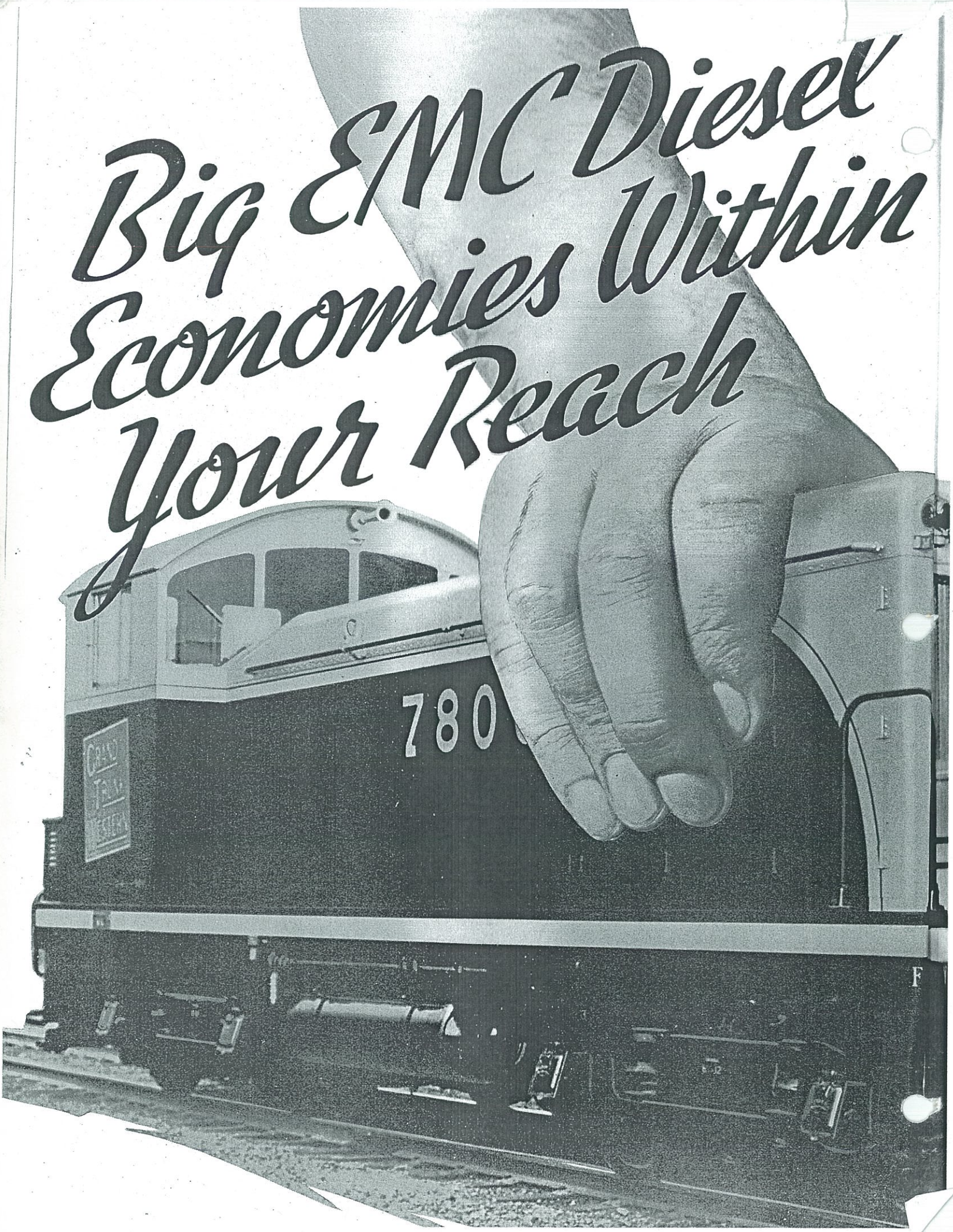
Time Cards Their Hobby

Chicago: Recently there appeared in these columns the story of a gentleman who collected time tables as a hobby. Now it appears that he is not alone in pursuing such a recreation. A request has been received from an organization known as The Transportation Club of Long Island for time cards and while the Publicity Department is always willing to oblige it was considered desirable to inquire as to the reason for such a request. Then it developed that a group of young men have banded to keep themselves informed on railway affairs and to collect *memorabilia* (the word is theirs) on this big subject. To the file of a thousand copies of time cards has now been added the employees' Time Tables No. 3 and No. 51 which are respectively the working cards of the Detroit Division & Detroit Terminal and the Chicago Division of the Grand Trunk Western Railroad Company.

Much Travelled Carrier

Not long ago a communication from the Stationery Department whose offices are located in Battle Creek, came to my desk enclosed in that type of envelope known as a "tuck-in;" you know, you score out your own name and when you have appropriate matter you enclose it in the envelope, tuck in the flap, write another address and send it on its way. This particular "tuck-in" was nice and clean and had been carefully handled in all its previous contacts. There was nothing to indicate its starting point but its first destination was Vancouver. After reaching the Pacific Coast it was destined to return eastward—I am assuming it started with the sun—and it was sent to Winnipeg. Montreal followed and then our busy envelope carried a message to West Toronto. Then it did a little local work by going over to Simcoe street.

Big EMC Diesel Economies Within Your Reach



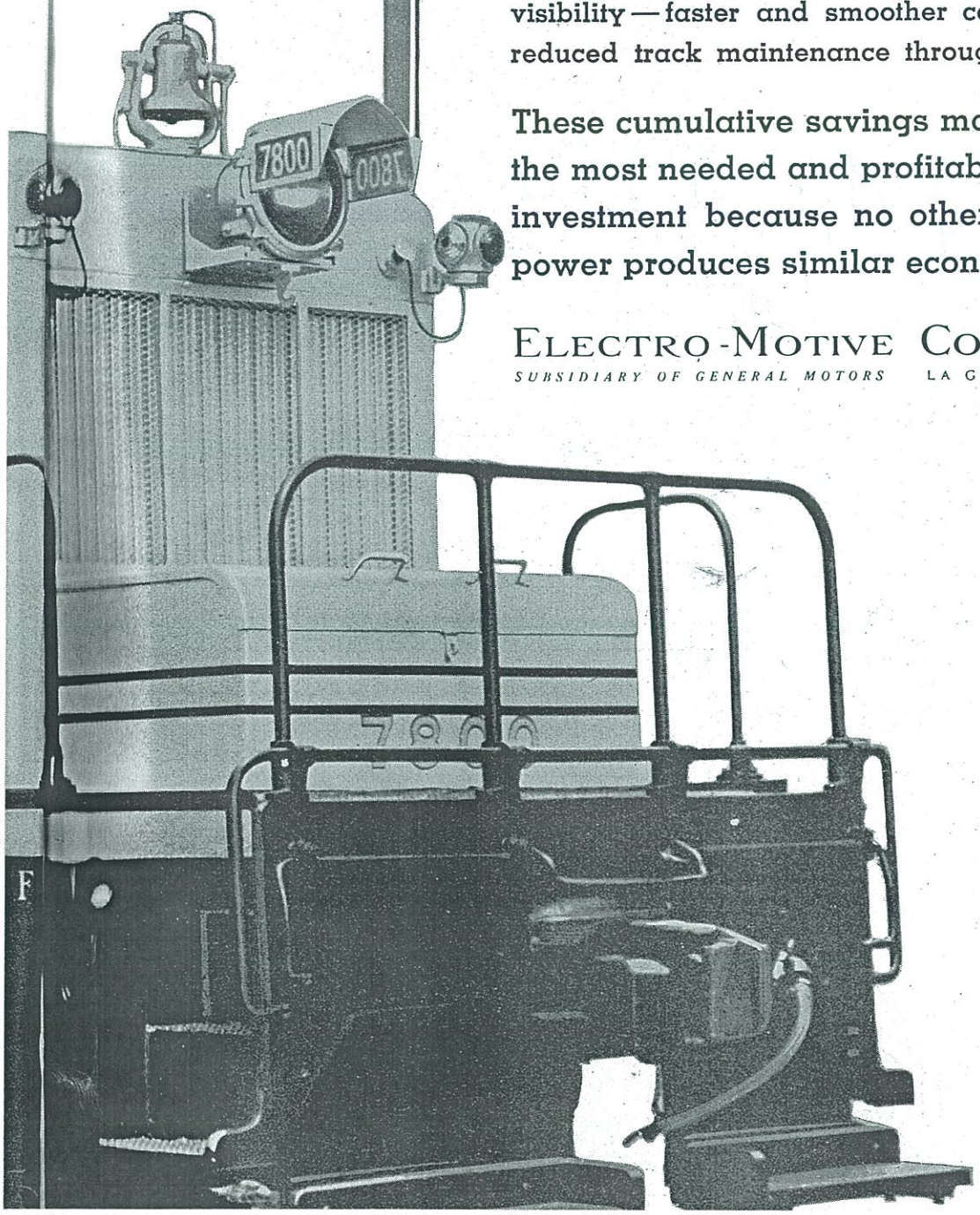
NOW as never before it becomes imperative that every dollar be spent where it will produce the greatest return.

Dieselize your switching operations at once and realize these available economies.

The 600 Hp. EMC Diesel Switcher operating at normal availability of 8,000 hours yearly effects savings averaging $16,000 annually. In addition to this large reduction in operation costs — sufficient to amortize the Diesel's first cost within five years — Diesel operation assures many other money saving benefits such as greater flexibility in service — greater safety through better visibility — faster and smoother car movement — and reduced track maintenance through less track wear.

These cumulative savings make EMC Diesels the most needed and profitable motive power investment because no other type of motive power produces similar economies.

ELECTRO-MOTIVE CORPORATION
SUBSIDIARY OF GENERAL MOTORS LA GRANGE, ILLINOIS, U. S. A.



GM
DIESEL
POWER

The Grand Trunk Western Lines

A Special Department Devoted to Chronicling the Events of the Last Month in Business, Social and Sporting Activities

THE Detroit railway women have fallen in line with many of the other large cities in the United States and have organized a Railway Business Women's Association, which, it is expected, will, in the near future, become affiliated with the Business and Professional Women's Organization. The object of the club is to further the educational and social interests of its members, to create loyalty and an interest and pride in the work of the railroads, steamship lines, and affiliated bureaus and committees which they represent. For the past several years there has been a Railway Club in Detroit known as the Detroit Girls' Passenger Club which permitted only girls employed in the Passenger work to become members. The success of the Railway Business Women's Associations in other cities had been observed for some time and inspired the girls of the Passenger Club to broaden out and have a like association, in Detroit.

At the January meeting of the Passenger Club a move was made to disband and reorganize taking in all women in the railway field, as well as those employed by steamship lines, travel bureaus, and associated committees to become known as the Railway Business Women's Association of Detroit. The first meeting was held in the Main Ball Room of the Book-Cadillac Hotel, and was presided over by Miss Margaret M. Dillon, of the General Manager's staff of the Grand Trunk. Miss Frances M. White, a New York Central woman and founder and first President of the Cleveland Chapter was the chief speaker for the evening. She gave a most interesting talk on the progress of the Association in her city and related many experiences in the organization and growth of the club. During the evening a temporary Chairman and Secretary were elected to carry on the work until such time as the Nominating Committee, who were also appointed that evening, could select a group of women for the nominating ballot. At the next meeting held voting took place and Miss Mae Crumbaker, of the Baltimore and Ohio Railroad, former President of the Detroit Girls' Passenger Club was made President by acclamation; Miss Lena Connor was voted Vice-President; Miss Margaret Dillon, Recording Secretary; Miss Thressa Stewart, Corresponding Secretary; and Miss Helen Knapp, Treasurer. The meetings of the association, which are held monthly, are proving most interesting and have been well attended. Six o'clock is the hour set, beginning with a dinner, followed by the regular business meeting and an enjoyable and educational programme is arranged for each meeting. Much enthusiasm has been displayed by the women of the various railroads, in Detroit, as well as the steamship lines, and travel bureaus represented, and the membership has already reached an encouraging number.

Detroit, Mich.

Billy Stob, the Grand Trunk's punching pugilist, invaded Saginaw Valley recently, and when he returned to Detroit, he had another scalp dangling from his midsection.

Battling Stob beat Walter Majeske to win, Earl Croshaw's official nod in the main event of Ernie Mesles fight card.

From all reports, it was not such a hot fight, nor a bad one; in fact, the last five rounds were bristling and heated but provided ample thrills, mainly through the clever manner in which Stob side stepped his opponent, slugging as he did so. Stob demonstrated clearly that his experience could make Majeske's look bad, he boxed when he wanted to and fought when he had to. Both boys tried to make the fight what the fans had come for and it was evident that they succeeded.

Stob was not being fooled, nor hurt much at any stage of the bout, and at all times had the situation well in hand.

Billy soon expects to eliminate another of the boys who are contending for the state championship, welterweight title, and he has the hearty support of all his Grand Trunk fellowmen.

An interesting side light was "One-Eyed" Connely, the world's foremost gate crasher, who was on hand and was seated in the ring side, long before the melee started.

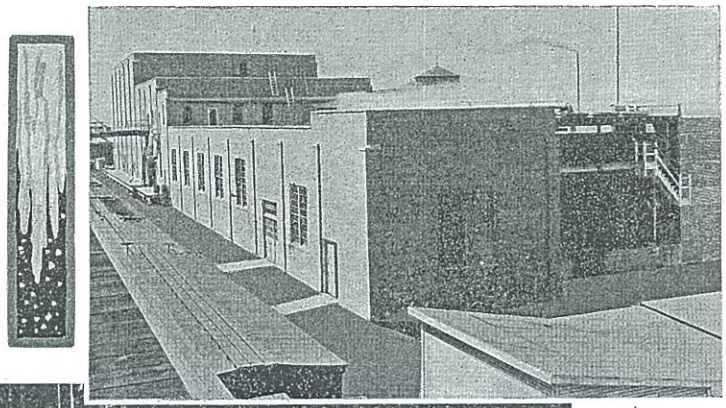
Chairman of Baseball, W. E. Lane, has entered his team in the "Twilight Division" of the Detroit Recreation League. It is comprised of Detroit's leading industrial and commercial enterprises, which have found baseball and other forms of recreation to be the rudiment of understanding among their employees, and have left no stone unturned to obtain the best amateurs possible. This, alone, insures a season of fast company for Chairman Lane and his men to compete with.

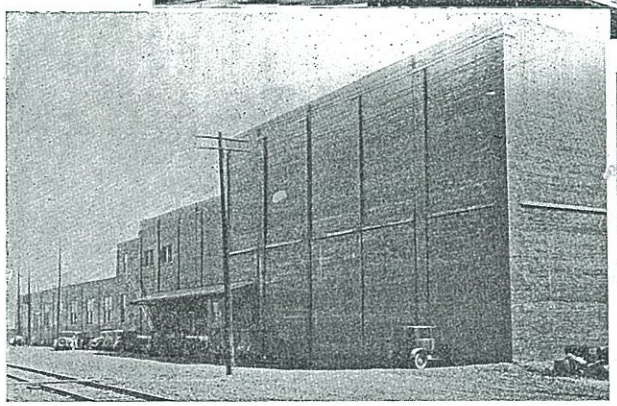
The Grand Trunk Baseball team journeyed to Durand, on Sunday, June 2, and were beaten by a score of 4 to 1; four hits were allowed by each team. The game was by no means a record one; but owing to the inclement weather for the past month, the Detroit team was not expected to start off the season in whirlwind fashion, but they hope to be in the leadership class before long.

The Playground (soft ball) has taken a grip on the association, in Detroit. Both girls and men are entered in various leagues outside the association.

The Detroit Association have formed a league comprised of six teams, Local Office, Auditor of Revenues, Milwaukee Junction, Auditor of Disbursements, Car Accounts and General Office. These teams are manned with talent of high quality and are expected to furnish recreation to many employees during the coming season.

The girls have been entered in Detroit's Business Women's Recreation Association and won their first game against the Parke, Davis Company's girls, with a score of 17 to 12. These girls have worked hard under the direction of Chairman Gravelle and play a brand of base ball that would do their brother workers justice.





Where more than 25,000 refrigerator cars will be iced, or re-iced, during the year: The new plant of the Continental Ice Refrigerating Co., at the Tunnel Yards, of the Grand Trunk Western Lines, Port Huron, which has a capacity of 8,000 tons of artificial ice and is equipped with the latest appliances for manufacturing and icing cars. The top picture shows the east section of the building, which includes the water-treating, engine and manufacturing room; centre, ice cakes of 400 pounds, each, recently removed from cans in the freezing tanks; bottom, northwest section of the plant, with the storage room in the foreground.

Port Huron Terminal

The local ice manufacturing and storage plant of the Continental Ice Refrigerating Company, of Chicago, located in the Tunnel Yards of the Grand Trunk Railway, at Port Huron, has been completed and is now in operation. The plant ranks as one of the largest raw water ice manufacturing units in the state. The building has been under construction for the past five months.

The Continental Company have a contract with the Grand Trunk Railway for servicing refrigerator cars of meat and dairy products passing through this terminal from Chicago to eastern points and will furnish ice for the various station uses on the railroad. Commercial ice will also be sold the local public through local dealers and distributors. A platform along the north side of the building has been provided for commercial sales.

The construction of this modern plant marks the passing of the large wooden ice house which has been torn down. This old building, which had a storage capacity of 22,000 tons, was built several years ago and was the annual scene of a large ice harvest. Approximately 900 carloads were harvested in Sarnia Bay and shipped through the tunnel each season for storage here.

The re-icing of refrigerator cars at this terminal has increased in volume during the past few years to such an extent that the old, natural, ice storage system proved inadequate and costly as compared with the use of artificial ice. In the year 1928, all records were broken in the number of cars re-iced at this terminal, a total of 25,416 cars being serviced. The handling of cars in the yards and through the tunnel set a record in 1928. During that year 481,770 cars were handled through the tunnel and a total of 1,058,460 cars were handled in the terminal. Sarnia terminal also set a record when 1,054,078 cars were handled during 1928.

The double deck elevated platform which extends along the south side of the new ice plant has been extended and is now over 1,000 feet long, from which 56 refrigerator cars can be iced at one setting. The new building is 358 feet long by 80 feet in width and, at the storage end, is 56 feet high. The main storage room at the west end of the building is 80 by 99 by 56 feet and has a storage capacity of 8,000 tons of ice.

On the first floor are located the water treating, engine, brine tank, and daily storage rooms. The second floor includes the general office, another daily storage room, a locker room for employees and a room in which

(*Continued on page 47*)

ACROSS THE BORDER

Oct 1936

By C. J. HANRATTY

[illegible] the original foundations [illegible] being laid a century ago [illegible] for what was later to become [illegible] of the world's great railway [illegible] systems, the settings were [illegible]. It is highly probable that [illegible] who, in 1836, were busy in [illegible] and St. Johns, Quebec, on the [illegible] making a "portage" at those [illegible] lessen the rigors and duration [illegible] journey between Montreal and [illegible], had no knowledge of another [illegible] pioneers then equally busy near [illegible], Michigan, on a line which was [illegible] to connect the city and the [illegible] acres of Oakland County. [illegible] rural Quebec to rural Michigan [illegible] a long distance across country not [illegible] traversed.

[illegible] experiments of Morse had not yet [illegible] evolved to establish the com- [illegible] effectiveness of the telegraph; [illegible] were slow and infrequent, news- [illegible] organizations such as the [illegible] Press and the United Press [illegible] unthought-of. Therefore, two [illegible] of earnest pioneers effected their [illegible] unknown to each other; yet [illegible] are the effects of time and the [illegible] extraordinary results of seemingly un- [illegible] and unpremeditated causes that [illegible]—one hundred years after the first [illegible]—these two foundation railways [illegible] found incorporated in one system, [illegible] Grand Trunk-Canadian National [illegible] ways.

The story of the Champlain and St. Lawrence Railway has had its telling [illegible] elsewhere in the columns of this publication. The story for present narration is that of the Detroit and Pontiac Railroad and its successors. The history of the time has been interwoven with the development of the thriving City of Owosso, which in July observed its Centenary with appropriate ceremonial and corporate and individual enthusiasm. In the ceremonies, the Grand Trunk Western Railroad was a participant and in a most appropriate manner the company was represented in the "Parade of Progress" by a replica of an ancient wood-burning engine and coach such as in earlier days served Owosso, beginning that service on July 1, 1856, eighty years ago. The replica of the old wood burner was made by the employees of the Coach Department at the Port Huron, Michigan Car Shops and, being built on a Ford tractor, it is "practical" and capable of operating under its own power. Even the whistle was "real" and tooted when necessary, and in this instance the hidden impulse was a tank of oxygen concealed in the tender. Nor was that all: Smoke literally "poured" from out the stack . . . The trick of that being a sawdust-burning device cunningly tucked down below. With bell ringing, whistle blowing and smoke belching, the old timer proved a real hit. Two members of the Stores Department at Port Huron, Frank Summerer and Frank Moore, were respectively Engineer and Conductor of this train.

The old-time train also carried old-time passengers . . . that is to say, costumes were produced from attic and elsewhere for a brief outing, so that the complete display was accurate and appropriate. Three children of Russell L. Gibbs, of the Port Huron Car Shops, in period costume, rode the rear platform and evoked considerable applause by reason of their aplomb, Robert P. Gibbs, 6, Elizabeth Ann, 11, and Priscilla J., aged 10 years, being the happy "passengers" for the occasion.

At the get-together banquet, The Grand Trunk Western was represented by Tom King, retired Superintendent, George Briggs, Trainmaster, P. Howard, Grand Trunk representative on the Michigan Railroad Employees and Citizens League, R. L. Gibbs, Port Huron, and J. P. Marshall, Agent at Owosso.

Western Railway Week

Railway week was celebrated in bang-up style throughout western territory each centre having a special programme. The first day was ushered in by a universal blowing of whistles, not at dawn, however, but more appropriately timed for 8 a.m. Chicago is always railway conscious but on this occasion it became even more so because some of the special events were held in the streets. One of these was the Hand Car Derby for the running of which the boys borrowed a section of the street car rails—or surface cars, to be quite accurate. That was a big event attracting a great crowd and affording just as much thrill as any turf derby. A relay race for Red Caps was another event in the open and how those boys did move. A further event was a train announcers calling contest at which all present asserted that they understood distinctly every word. As in Canada, an old-time Morse operators hook-up was prepared and several dignified executives joined the rest of the boys to pound the keys. In this connection there was a special contest for the writing of train orders and some of the specimens which won prizes were really Spencerian in neat ornamentation.

Something New in Trade

This paragraph can hardly qualify under the heading of railroading but inasmuch as a vast army of railwaymen are interested in golf—including the Editor and your perspiring correspondent—that fact will permit the admissability of this bit. Glancing over one of the big dailies the eye fell upon an arresting display advertisement making its appeal on behalf of one of the big State Street Department st[illegible]s. "Trade in Your Old Clubs and Pl[illegible]ile you Pay!" was the special invita[illegible]nd the details ran to the effect tha[illegible] a trade-in the golf shop would all[illegible] on any iron and $1.25 on any w[illegible] Then followed the announcement [illegible]rdless of condition of your old club, w[illegible] accept a trade-in Iron-for-Iron an[illegible]od-for-Wood on the purchase of clubs listed in this advertisement."

"THE LITTLE THINGS"

Agent James E. Mason at North Stratford, N.H., wants to know if any reader of the Canadian National Railways Magazine has lost a kodak film. Here is his inquiry: "On or about the week of July 27th there was found at this depot a kodak film. The party who found it had it developed. It shows pictures of our tracks, I think in Canada between Richmond and Montreal, also a tower shanty and a lady's picture. It would appear to be some railroader who dropped it. I referred to one railroad man whom I thought might have been the owner but he says no. Would you consider it proper to make some mention of this in the next issue? You know it is the small things that sometimes count in life. It is of no use to me but no doubt would be cherished by the owner."

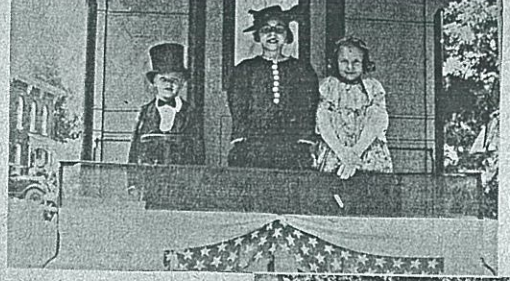
EARLY MICHIGAN RAILWAY HISTORY

BY RUSSELL L. GIBBS

WHEN the city of Owosso, Michigan, recently observed its Centennial the forces of the Grand Trunk Western Railroad were active participants. True, the railway had been there only eighty years—and eighty years is a respectable span—yet the predecessor organization, the very foundation line, had been operating in Michigan for a hundred years and both predecessor and successor companies may well lay claim to deep-centered interest in the growth and development of the State.

The original line was the Detroit and Pontiac Railroad, which passed through pretty much every range of experience that has fallen to the lot of pioneer enterprises, including raw experimentation, bankruptcy, reorganization and lengthy litigation. It was first planned to connect Detroit with the rich agricultural region of Oakland County, and the flouring mills which were already operating in that section. Its charter bore date of July 31, 1830, and this was the first railroad incorporated within the limits of the Northwest Territory. It was also the first to actually lay rails and to use a locomotive for the operating power in the state.

Actual construction had to wait on finance, and even after work was commenced progress was slow. It was not until April, 1836, that the contract was let for grubbing the first fifteen miles, and then a swamp with a few deep sink holes near Royal Oak delayed progress. In July, 1838, the road was opened to Royal Oak, and August 16, 1839, to Birmingham. Up to this time the cars had been drawn by horses, but now a locomotive was purchased, built by Baldwin of Philadelphia, which today are the largest locomotive works in the country. This engine was first named "Sherman Stevens", and afterwards the "Pontiac". This engine must have been of superior workmanship, for it was in use as a switch engine nearly forty years later.



At the Owosso railway celebration. Above: Robert P. Gibbs, 6; Elizabeth Ann Gibbs, 11, and Priscilla J. Gibbs, 10, children of Russell J. Gibbs. Centre: The old locomotive. Bottom: The coach.

This road was completed to Pontiac on Fourth of July in 1843. The track and equipment of the pioneer road was primitive, consisting of a strap rail spiked to wooden stringers. These spikes, after a little wear, would come out of the end of the straps and stick up from three inches to six feet. Instead of the Conductor carrying a ticket punch, as he does today, they had a heavy hammer with which to nail down rail straps, and trains were considerably delayed while the conductor fixed the track. Maximum speed was fifteen miles per hour. Time between Detroit and Pontiac was indefinite. Trains were very accommodating. They would stop anywhere to take on or drop a passenger.

Alfred Williams, principal promoter of the road which later was destined to reach Owosso, appeared before a Legislative Committee on an investigation of safety of passengers conveyed by steam on roads partly constructed of iron. The questions propounded were 80 in number. Mr. Williams was asked question No. 79, "How many (if any) accidents endangering life have occurred during past year?" The witness, after carefully considering the importance of the question, and satisfying himself that he duly comprehended its nature, replied that "no accidents of any consequence had occurred except one, and that was to a middle-aged couple who left Detroit for Birmingham and died of old age before they reached that delightful rural village!" That remark broke up the investigation.

That is the story of the first link of what is now the Grand Trunk from Detroit to Grand Haven.

In those early days Governor Mason was an enthusiast and he urged the subject of internal improvements within the State. Population had increased from 8,896 in 1820 to 175,000 in 1837. Natural resources of Michigan were great and capable of vast expansion. The sound of the falling tree was heard everywhere. But transportation was the chief problem of internal improvements. Early pioneers believed that there were great possibilities of navigation on the Shiawasse River. Considerable amount of

(*Continued on page 25*)

Pioneers of Railways Honored

Seven "Old Timers" of Port Huron Terminals Have United Service of 265 Years—Link-and-Pin Days Recalled

By Russell L. Gibbs

THE old car ferry, the *International*, puffed away in mid-stream of the St. Clair River, struggling against the rapid current that marks the mouth of this beautiful stream into which Lake Huron flows. Along with her sister ship, the *Huron*, they constituted the connecting link of the Grand Trunk Railway of Canada and the Chicago and Grand Trunk Railway of the United States. It was the daily task of these ferries to convey the many freight and passenger trains between the ports of Point Edwards, Ontario and Fort Gratiot, Michigan. Hundreds of immigrants were arriving daily in special trains, en route to the North-Western Country. Passengers peered from the windows of the dinky coaches as the ferry entered the slip, many viewing for the first time the soil of the American Republic.

On the bank of the river the village of Fort Gratiot was the scene of many activities. Hotels and business places were doing a thriving business. The locomotive and car repairs shops of the Grand Trunk, large plants in their day, formed an industrial background to the passenger depot and Customs buildings. Dinky locomotives, big power in those early days of railroad history, stood by with smoke belching forth in columns from the old, funnel-shape stacks. These engines, the pride of the road, with their many brass trimmings shining in the sunlight, were waiting to haul their trains on to Detroit, Chicago and the West that was to be the new home of many of these immigrants.

Short wooden, open platform, passenger cars were heated with coal stoves, lighted by oil lamps, upholstered in bright red plush and the windows provided with wooden shutters. These cars required many routine duties of station employees. Fires had to be attended, coal boxes filled, oil lamps cleaned and filled, cars cleaned out, running gears inspected and water for drinking tanks carried in pails from barrels mounted on wheels. The engine crews were busy shining the brass trimmings. The train crew were busy getting ready for their trips, answering questions of inquiring passengers and smoothing out their beards as they cried out "all aboard". Employees in the shops were busy repairing locomotives and cars. At the freight sheds, which lay along the bank of the river, freight handlers were busy transferring freight.

What a change time has wrought! Fort Gratiot and Point Edwards have lost their significance as railroad terminals. Fort Gratiot has become part of Port Huron although Point Edwards still retains its municipal identity. The building of the tunnel under St. Clair River was followed by new terminals, roundhouses and shops being built at new locations in Port Huron and Sarnia. The brass trimming and funnel shape smokestacks have disappeared. Passenger cars are built of steel, vestibules have taken the place of the open platforms; cars are heated by steam and illuminated first by gas and later by electricity. The old link and pin was replaced by the old Miller hook-notch couplers, and, finally, by the present automatic couplers. All rolling stock is now equipped with air brakes. The trainmen have discarded their beards. Trains are now hauled in international service by large electric engines, through the St. Clair tunnel. Motive power, it seems, is getting larger with each decade.

Such was the reminiscence of a group of seven employees, "old-timers" of the Port Huron Terminal, who have recently ended their railroad careers by retirement and whose combined service aggregates 265 years. They have lived to take part in all these changes. Their service has been efficient and faithful. They have contributed a great share of their lives to the progress of the railroad. In recognition of such faithful service the company has for many years provided a fixed policy of pensioning for its superannuated employees by which these men and many others are financially provided for in their advanced age. In addition to the pension system the company has made provision where an employee has 30 years or more continuous service, to allow an extended vacation on full pay on the basis of three days for each year, and at the expiration of which the regular pension starts.

Half a century of continuous service, 32 years of which was served in the capacity of Locomotive Foreman at one roundhouse is the record of Frederick D. Sovereign, of Port Huron, on the Grand Trunk Western Lines, who recently retired on pension. This is a record which would be an enviable one on any railroad in the country.

The first experiment on the Grand Trunk in light passenger trains by electricity was carried out by Mr. Sovereign, who also installed lights on the car ferry *Milwaukee*, in 1890. When he started in the shops they were just beginning to replace the old "bonnet" type of smokestack on engines and 16 to 18 inch cylinders were considered "big". The familiar flag pole at the round house was put up by Mr. Sovereign.

Born at Komoko, Middlesex County, Ontario, Mr. Sovereign came to Port Huron with his parents at the age of three years. He spent his boyhood days there and served an apprenticeship with the Port Huron Phoenix Iron Works. His first work consisted of operating a turning lathe. He continued at general machine shop work for five years, when he was selected by the Superintendent of Motive Power Herbert Roberts, to be "farmed" out to the Port Huron Light and Power Company to study the installation of electric lighting system, as the incandescent lamps were just coming into popular use and the management was desirous of replacing the carbon arc lights in the locomotive shops with the new system. After several months with the electric light company he was transferred to the St. Clair Tunnel, preliminary engineering job on the bank of St. Clair River, where the present Tunnel Power house is located. Here he assisted in sinking a shaft to a depth of 85 feet with a drift of about 20 feet, all of which was abandoned after nine months' work, in July, 1887.

Mr. Sovereign returned to the locomotive shops where, with his knowledge of electric lighting system, he was selected to operate the first experiment on the Grand Trunk with lighting passenger trains by electricity. A dynamo operated lights in the day coaches. This experiment was not entirely satisfactory and was abandoned for the time being. In 1890, he was sent to Grand Haven to install lights on the car ferry *Milwaukee*. From there he spent several months on the line engaged in electrical installations at Elsdon, Lansing and Flint, only to return to the Fort Gratiot locomotive shops to install the new electric lighting system. After the shops and roundhouse had been wired, he operated the lighting plant for a period of about three years when he was promoted as supervisor of a gang in the erecting shop. In January, 1898, he was transferred from the erecting shop to the roundhouse where he became locomotive foreman which was to be his position for the next 32 years. In 1890, the St. Clair tunnel was completed and, in 1900, a new roundhouse terminal was constructed at the tunnel yards and all machinery and equipment was moved from Fort Gratiot and the locomotive shed, at 16th Street, to the new buildings.

In comparing the size of motive power in use in the early eighties with the present power Mr. Sovereign says: "Back in the days when I obtained my first experience in building and repairing locomotives it was an easy task for one man to take the main rod off one side and carry it around to the other side; the present main rods have to be handled with chain falls. When I first started in the shops they were just beginning to replace the 'bonnet' type stack on engines with the long narrow stacks and each shopping saw some of the brass work, used simply to give the locomotive a 'dressy' appearance, discarded. They still had the old link and pin couplers until about 1900, when the automatic couplers had proved a success and were being installed. In the early eighties our motive power was considered 'big' when an engine came out of the shops with 16 and 18 inch cylinders, and classed as '40 tons', working with 150 pounds of steam and could handle a train of 30 cars with ease. Some contrast to-day with our big super-heated power of 26 inch cylinders classed as weighing 320 tons, and working with 210

THE REWARD OF SERVICE

On several occasions recently the news columns of The Times Herald have contained "stories" concerning the retirement on pension of some veteran in railroad service, connected with the Port Huron terminal of the Grand Trunk Western.

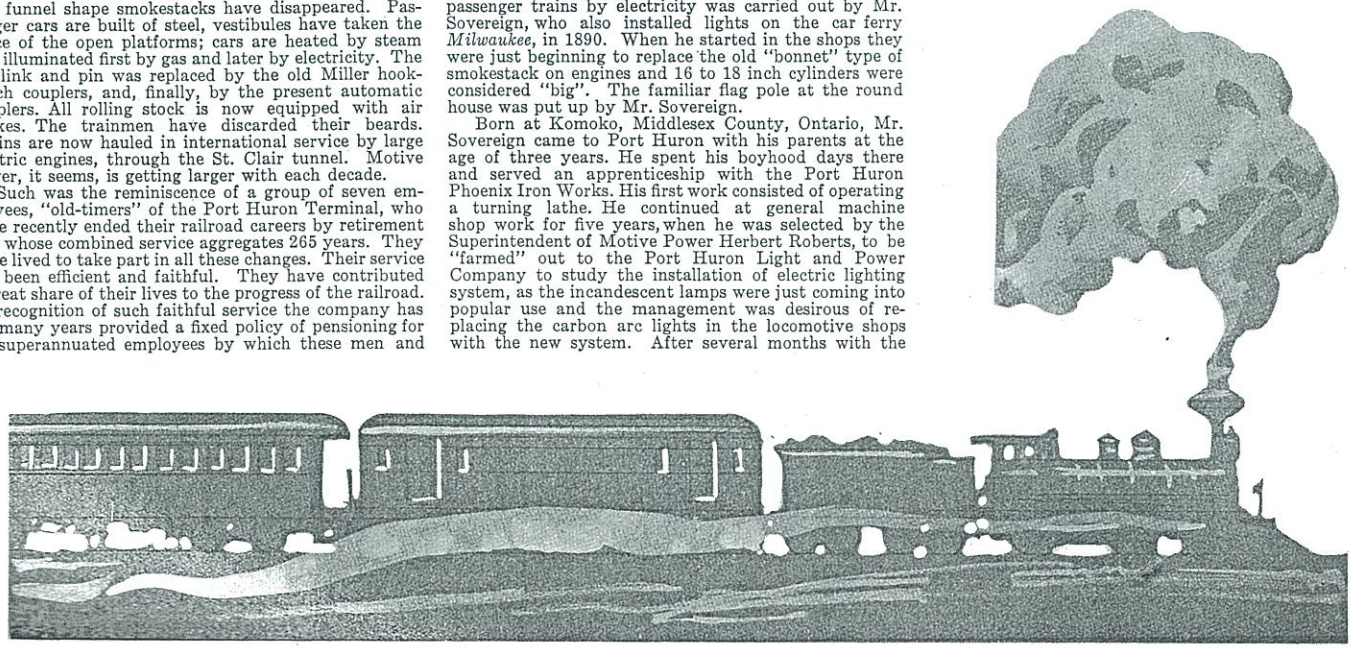
Some of these men, if we remember aright, have given a half century of service in the shops and on the railroad in the business of transportation; which by the way, is one of the most important of modern public service utilities.

That they have given efficient and faithful service during these years we do not have to take for granted. The record is there.

Probably there is no other business in which the human element is so important as on the railroad.

It is this combination of efficiency and faithfulness upon which we must depend for our safety as we entrust ourselves to the care of these men when we travel up and down the country.

It is that sort of service for which the railroad company has rewarded these and other men by retirement and pension.—*The Times Herald, Port Huron, Mich.*



Edmund M. Utting, coach cleaner, Port Huron, Mich., who has retired after 40 years of service.

pounds of steam and handling 100 cars with ease! It has been a great experience to have been able to watch such great progress and development of motive power. Although I always loved machinist work, I had gained considerable knowledge of electrical work at the time when Thomas Edison's invention of the incandescent lamps had opened up such a vast field of endeavor, and while I spent many months on this work, I always had a longing for the environment of the shops and roundhouse. It is with regret that I must give up my association with my fellow workmen at the roundhouse and in the terminal. I always received splendid co-operation in maintaining efficient motive power, from the boys of the roundhouse staff."

Orville A. Smith, mechanical lay-out man, Port Huron, Mich., who has retired after 34 years of service.

The familiar flag pole at the roundhouse was put up in 1892 by Mr. Sovereign. It originally consisted of two poles, one 80 feet and one 50 feet in length. They were obtained from a marine captain and were hewed out of logs on the bank of St. Clair River, at Fort Gratiot, and transported to the roundhouse on flat cars. Because of decay the pole was recently cut down in height from 125 feet to 100 feet.

As a token of the esteem in which he was held, both by the employees under his jurisdiction and officials connected with the Motive Power Department, Mr. Sovereign was the recipient of several gifts. The employees at the Port Huron roundhouse presented him with a beautiful mohair arm chair. The locomotive foreman and road foremen of engines on the Western Lines presented him with a leather travelling bag and the Motive Power Department supervisors also presented him with a gift in the form of a military kit.

A group of local officials and friends recently surprised Mr. Sovereign at his home with a party and luncheon, on which occasion he was presented with a set of briar pipes and Mrs. Sovereign was the recipient of a beautiful electric table lamp.

Frederick D. Sovereign, locomotive foreman, Port Huron, Mich., who has retired after half-a-century of continuous service.

In appreciation of Mr. Sovereign's long and faithful service the company has granted him five months' vacation at full pay after which he will be retired on regular pension.

Frederick Endean, Shops Department, Port Huron, who has retired after 38 years of service.

William A. Morden, St. Clair tunnel engineer, has recently retired on pension after serving the company faithfully for a continuous period of 49 years and two months, of which 32 years have been spent hauling trains in international service through the tunnel.

Harry J. Pugh, warehouse cooper, Port Huron, Mich., who has retired after 19 years of service.

Mr. Morden was born at St. Ives, Ont., on February 11th, 1863. In 1881, at the age of 18 years, he went to the Stratford shops, seeking employment but there being no vacancies he went on to Port Dover, where the Port Dover and Georgian Bay Railroad was under construction. He here started his career as a railroad man, as a fireman on an old woodburning engine. Because construction of this road was discontinued during the winter months he came to Fort Gratiot, where, on January 2nd, 1882, he worked his first day for the Grand Trunk Railway in the roundhouse. In March of the same year he was sent out as fireman on the Michigan Air Line branch and received 90 cents for 13 hours' work. In July of the same year, he was transferred to Attica, where the Grand Trunk had taken over the Port Huron and Lake Michigan Railway, changing the name to the Chicago and Grand Trunk Railway. Here he worked on passenger and freight trains between Fort Gratiot and Battle Creek.

Henry C. Reisig, chargehand, Port Huron, Mich., who has retired after 34 years of service.

He was promoted to engineer, in 1889, receiving his first assignment on a night switch engine in the Chicago yards, at 28 cents per hour. Transferred to Fort Gratiot, in January, 1890, on the spare board, his first regular run was attained, in 1892, out of Battle Creek, where he continued to run until he was finally transferred to the St. Clair tunnel to operate the new steam locomotives built especially for tunnel work.

This was in January, 1899, and he has continued at this post until his retirement. In 1907, with further study he qualified to operate the new electric locomotives.

During this long period of service Mr. Morden has only been in one accident, and has never been involved in any accident which proved serious, or fatal, to any person. He comes from a family of five brothers, all of whom had careers as railroad engineers. With Mr. Morden's retirement only one other brother remains as

(Continued on page 44)

William A. Morden, St. Clair Tunnel engineer, who has retired after 49 years of service.