

GRAND

TRUNK

WESTERN

DIARY

WINDSOR EVENING

RECORD

GRAND TRUNK RAILROAD KODI.

The Detroit Post of Sunday morning says, "At about ten o'clock the train on the Grand Trunk Railway due here about four hrs., was thrown from the track about half this side of Mount Clement. The car into which it was carried by a broken rail, came to a standstill some rods off the bank, so that the frame cold of the fire, the train had not got under full steam. The engine, being at the station, had difficulty getting up steam again, so that the train did not move until about fifteen minutes after the accident. The two oldest persons on the train, followed it up the bank of the road, followed it to the station, where they were dropped about fifty rods. When the engine came crawling down the road, it is said, and no lives were lost, and it is believed that most of the injured were of a very serious character."

Dr. James A. Bradle, of this city, who probably has as fully as any one, and he believed that those of his bones are broken, thought he suffered violent contusion in the right side, and Dr. Bradle thinks that one of the ribs is fractured. He also received a severe wound upon the right side, which is quite painful, but not of a serious character. There were some forty or fifty passengers in the two cars which capsized, but no more than half a dozen were injured. One gentleman named Wood had a pretty severe pain, and another named Mr. Leman, was considerably hurt about the head. One man was so caught in the car as to be unable to extricate himself, and is reported to have been beaten to death before he could be procured and the car chopped away. He proceeded on their way. Among the passengers on the train were the Rev. Mr. Lorin of the Mariners' Church, and the Rev. Mr. Ballagh, of the First Congregational Church of this city. They escaped with slight injuries.

It is a wonder that the passenger escaped with so little injury. Both cars in going over the embankment made a complete revolution, and the inmates were hurled about in the most unmerciful manner. The car went over twice right and wrong, and one of the passengers twice striking upon that side, as the car was rushing in the mud, and the sun was shining in the windows on the opposite side. These were fortunate circumstances, as only those upon the left hand side of the river were struck, but fortunately the cars did not strike fire. In the forward car the stove completely exploded, and the door, owing to the violence of the impact, a boy happened to alight near this door. Dr. Brown said to him, "Master, how do you get out of this car, for it will burn in a minute?" "I shall shut this stove door first, said the boy, and he stopped to do it, thus preventing the car from catching fire. The passengers had no difficulty in getting out of the car. The car was the last one to be damaged, but were opened with not much delay.

February 17

1872

Toronto Globe

ACCIDENT ON THE GRAND TRUNK. - At Mount Clemens Tuesday afternoon an accident occurred on the main line, which has resulted in the death of two men—the engineer and the fireman of the train. At the point named, No. 6 express east came in collision with a cow crossing the engine and causing such injuries to the engineer and fireman as to produce their death. Matthew Bartle, nephew of F. Bartle, of the Railway Hotel, the engineer, was a single man, 26 years of age. The name of the other unfortunate we were unable to obtain. There losses are supposed to be in Michigan. None of the passengers were injured.

June 18
1875

TWENTY-SIX KILLED

**And Half a Hundred Maimed
and Wounded.**

AN AWFUL COLLISION Between Two World's Fair Specials.

CANADIANS ABOARD From Toronto, London and East End

THE DEAD ARE BURNT BEYOND RECOGNITION —TRAIN HANTS DISOBeyed ORDERS —ENGINEER ARRESTED.

Battle Creek, Oct. 21.—Twenty-six bodies of charred, blackened flesh, &c. that remain of what less than 24 hours ago were men, women and children in the enjoyment of life, health and happiness, rest upon the floor of an improvised morgue in the basement of a furniture store of this city. A mile away in the City Hospital are a score or more of human beings with gashed bodies and broken limbs. Add to this an engineer in gaol and a conductor a fugitive from the law, and the story is

One Thousand Six Hundred and Eighty Train Passengers
Maurice, Auburn, N.Y., injured.
Mr. George Steingel, Englishman, highly hurt
in R. Williams' Toronto, Ont., back injured
and was taken to the residence of
Mr. Brooker.
Miss O'Doherty, Oswego, N.Y., right leg
broken.
C. F. Adams, Buffalo, N.Y., left hand
injured.

Disobeyed orders.
Direct disobedience of orders on the part of the Chicago & Grand Trunk engineer and conductor, both of whom had seen long service with the company and were regarded as model employees, was the cause of the tragedy. A Raymond and Whitcomb special train of eight palace cars filled with eastern folk, who had been taking in the sights of the World's Fair, left the North-west street depot of the road at Chicago at 8:15 on the first section of the night express known as No. 6. The train was in charge of Conductor Burroughs, Scout and Engineer Harry Woolley, both residents of this place. All went well until the Battle Creek depot was reached. This was an easy transition to the rail road yards, a distance of a mile, and a half, where is a double track. When the unfortunate special came to a full stop in the depot the night operator handed to Conductor Scott two copies of an order for the train to proceed to the double track east of Main street, about half a mile distant and there await the passing of the Pacific express.

Now as No. 6 thus far, which was to come through the community of Sarnia, had

many years service and were in poor condition to withstand a collision. Every one of the fated number was packed with eastern people, the majority of whom, taking advantage of the low rates, were on their way to take in the last week of the exposition. The Pacific express was in charge of Conductor John Bird and Engineer G. L. Cranshaw, both of whom had received orders at Lansing to look out for the westbound train on the double track, and were accordingly on the alert.

After receiving orders at the Battle Creek station Engineer Woolley proceeded up the double track, but instead of stopping, in accordance with his instructions, until the west-bound express had passed, he continued on, and entered again on the single track. He had hardly gone more than an eighth of a mile when the headlight of the Pacific express was seen coming around the slight curve behind the telegraph office of the railroad yards. It was speeding westward at a rate of forty miles an hour. There was no time to apply air-brakes or reverse levers. The en-

gineer, whose fate is still uncertain, is a daughter of Mr. W. B. Clarke, a prominent dry goods merchant of Sarnia, who is connected by marriage with the family of the late Hon. Alex. Mackenzie. Mr. Bradley is about 35 years of age.

The terrible event has produced a most depressing effect upon the bank staff.

A TORONTO MAN HURT.

The statement in the report of the ac-

cident yesterday that a body had been

taken from the wreck on which were found

that there were thirteen coaches on the failed train and that the train from which it had been, was numbered thirteen. It had been in previous wrecks.

MORNING IN SARNIA

Sarnia, Oct. 20.—A Bloom was cast over his town today at noon when the bad news was received that Albert Bradley, of the Canadian Bank of Commerce, Toronto, son-in-law of Mr. W. B. Clarke of Sarnia, also Mrs. Bradley, were on the ill-fated train which left Sarnia Tunnel last night at 10:50, bound for Chicago. Mr. Bradley, who now is in the hospital at Battle Creek, Mich., has a leg amputated, and up to the present time no tidings have been received of Mrs. Bradley, who undoubtedly is numbered with the unfortunate victims of the horrible disaster. On receipt of the news, Mr. W. B. Clark and W. B. Clarke, Jun., commanding Dr. Johnston, left by the Erie express this P. M. for Battle Creek. Mr. Bradley has for several years the accountant of the branch of the Canadian Bank of Commerce at this place, and was well and favorably known, and his wife, formerly Miss Emily Clarke, was one of the most popular and best known ladies of Sarnia. The family have the deepest sympathy of the community throughout the whole town.

East End branch of the Bank of Commerce, and was well liked by all the Toronto staff of the bank. He left on Wednesday afternoon for Chicago, accompanied by Mrs. Bradley and their two children. Fortunately, the children were left behind at Sarnia with their relatives there thus escaping their parents' awful fate.

Mr. T. W. Nesbitt, the manager of Sarnia branch, telegraphed the news of the accident to Toronto, and was immediately telegraphed to go on to Battle Creek and look after Mr. Bradley's comfort. Mrs. Bradley, whose fate is still uncertain, is a daughter of Mr. W. B. Clarke, a prominent dry goods merchant of Sarnia, who is connected by marriage with the family of the late Hon. Alex. Mackenzie. Mr. Bradley is about 35 years of age.

The terrible event has produced a most depressing effect upon the bank staff.

A TORONTO MAN HURT.

The statement in the report of the ac-

cident yesterday that a body had been

taken from the wreck on which were found

October 18

1893

Toronto Globe.

BALTIMORE BOOK

Remains of Mrs Albert Brad-
ley identified.

SUPERIOR STORES

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had been made
by the inhabitants of the town in the month
of July, and were drawn up under the authority
of the town council, and were to be used in
the defence of the town against the French.

RAILWAY NEWS.

A Mix-up on the C. and G. T. R.

Cape, Mich., Dec. 20.—A collision occurred on the Chicago & Grand Trunk railroad at this place this morning about 4:30 between two freight trains. The heads of both engines were stove in, one car loaded with Pittsburgh flour was telescoped and two other cars damaged so that live stock in them will have to be transferred to other cars. No damage was done to other stock. The train hands escaped without injury, although the engineer of the eastbound train, who stuck to the tender of his train being elevated at rear end as to telescope the car following. The crews had orders to pass each other, but the eastbound train could not be got under control in time to avert a collision. Superintendent Atwater, R. Williams and Road Master Harrigan were early on the scene.

December 31

1897

MAIN WEEK AT JACKSON.
A Passenger Train Ran Into an Open
Switch To-day.

Asst. Asst.

Yester., March, Feb. 1.—The Grand
Trunk passenger train leaving this
city at 6 a.m., ran into an open switch
near Jackson. The engine, tender and
couplers leaving the city by the
switch, passed it back, or caught rides,
and the trouble was not over at 10 a.m.

Jackson Michigan

February 1
1899

FATAL COLLISION.

Two Passenger Trains Come Together at Imola, Michigan.

Imola City, Mich., Feb. 6.—A westbound passenger train was stranded at the depot in Imola City this morning, waiting for No. 71 westbound passenger train, which left Port Huron Feb. 6, 30 a.m., and which should have stopped. Instead of stopping it plunged into No. 6.

THE DEAD.

Enginner Fairbanks, of the eastbound train.

Edward Reid, Lennon, Mich., work on westbound train.

John Stuart, Lansing, Mich., work on westbound train.

THE INJURED.

George Mathan, of eastbound train, several ribs broken.

— Burris, of Lapeer, Mich., on eastbound train, leg broken.

Hopley White, of Lapeer, Mich., on eastbound train, ankle broken.

— English, of Struthery, Pa., slightly bruised about the head. Enginner Fairbanks died before he could make a statement as to why he did not stop his train.

The firemen of both locomotives escaped without a scratch.

The locomotives were hardly derailed and the mail cars of both trains left the track and remained in various positions on the main tracks.

The passenger cars were piled up in great

February 6
1899

TORONTO, SATURDAY, MARCH 11, 1899.

STAR

THREE FATALLY HURT IN A G.T.R. WRECK.

One of Them Mrs. Fred W. Emsley of Toronto—Signal Was Failed to Operate, Two Trains Crashed Together.

ELKHANGER, Ind., March 11.—Two freight trains engines collided here last night as the result of which the following persons were injured: Nowlenty, engineer, badly hurt. Jas. S. Elliott, Erie, Pa., thought to be fatally hurt.

Mrs. Fred W. Emsley, Toronto, Ont., injuries probably fatal. Henderson, laborer, stealing a ride, fatally hurt. Lymph, fireman, serious.

The collision occurred at the intersection of the Elkhanger and the Big Four tracks. The two passenger cars of the Elkhanger met on the Elkhanger track, having a signal in sight. The switch was thrown, but had not been tampered with, and was found to be operate. The collision took place somewhat. Next night those who were seriously injured

← Toronto Star
MARCH 17 1899

RAILWAY WRECKS.

Several Bad Ones Resulted From Yesterday's Fog.

None of Them Were Attended With Fatalities.

New Boston, Mich., March 22.—The first collision that ever occurred on the Toledo division of the Flint & Pere Marquette road occurred one mile north of this place this afternoon. Train No. 48, freight, crashed into the rear end of train 46, freight, southbound.

Fireman Lewis Hales, of Saginaw, on train 48, jumped to save his life and was killed instantly.

Joseph Rose, engineer, Dugal Smith and Mike McDonald, brakemen, were also seriously injured. Engine No. 105, of train 48, which was a new one, was thrown from the track and entirely demolished, with about ten cars loaded with potatoes, feed, buggies and merchandise. The estimated loss will reach \$20,000. The cause of the wreck is probably due to the dense fog that has hovered over here today.

ONE AT MONROE.

Monroe, Mich., March 22.—At 9 o'clock this morning, two miles north of Vienna, there was a collision on the Michigan Central railroad. Two freights came together head on, wrecking both engines, derailing twenty-five cars and causing a blockade. Michigan Central trains are running over the Lake Shore tracks. No one was hurt.

ANOTHER AT LAPEER.

Lapeer, Mich., March 22.—On account of the heavy fog this morning a serious collision occurred on the Chicago & Grand Trunk road half a mile east of here. Train No. 1, due here at 5:50, ran into a freight train, smashing a caboose and freight cars. The passenger engine lost her smoke and sand pipes, but she never left the track. The freight was taking water on the passenger's time. No one was hurt.

MARCH 23
1899

RAILROAD WRECK.

One Dead and One Severe Injury
Caused one Yesterday on
the P. O. & W.

DETROIT, Mich., Jan. 3.—An accident occurred on the L. O. & N. rail road last evening. A regular passenger stage here at 8:30 p.m., was upset and the coach, containing 30 passengers, was turned nearly completely over and broken.^{up}

The accident was caused by a head-on collision which occurred about one mile west of Cole station. Strange to say there were no fatal or very serious injuries, many, including a balloon passenger, running without a scratch. Those injured were Harry Smith, severely wounded; Cadet Cochran, with broken glass; two ladies, Wright named Ohmer, one cut the hand and the other an arm.

January

4
1900

Passengers were brought to an auto car and the injured taken to the Hotel Hodges. This is the first accident occurring in the history of this road during the life of its existence.

TWO MEN KILLED.

Conductor and Engineer Meet Death at Port Huron.

Port Huron, Mich., Jan. 20.—Conductor John O. Burke and Engineer Wm. Rigg were killed tonight in the tunnel yards. The fatality occurred at the east end. Rigg's engine, No. 1219, was standing on the main track. Fireman Dillon had just gone into the dispatcher's office to get orders. Within a few rods passenger train No. 2 backed down on the main line and without a word of warning crashed into the standing engine. Conductor John Burke was standing on the rear of the last coach, which struck the tender of the engine. The tank was knocked up into the cab and Rigg was crushed to death in his seat. Burke, if he saw the engine, did not have time to jump and was crushed against the tender. The crash was heard by the inmates and within a few minutes efforts were made to take out the men, but they were both dead when the debris was cleared away. Coroner Carlile was notified but the bodies of the dead men were placed in a couch and brought to the freight shed at the tunnel depot, where they were laid out on trucks. The bodies were viewed by a large number of passengers waiting for the train.

Rigg leaves a widow and two children. Burke also leaves a family. Both were experienced railroad men.

As George Rigg of this city has a nephew, an engineer up there running west, a son of Engineer John Rigg, who was killed in a snow-plow collision some years ago down east, he was seen today, but has heard nothing of any accident. His nephew's name is John, and he has another named George, ~~is~~ a railway man.

January 22
1900

engineer of the snow train.

TERRIBLE CRASH.

The caboose was pushed back by the impact into the sleeper, crushing the latter for half its length and burying it in an ocean of broken glass and floor splinters. The car nose, impeded by the obstructions, forced up onto the roof of the sleeper, and to this fact may be attributed the small loss of life.

The shock of the collision jarred the employees in the other cars, and in a few minutes they were on the duck yards, and with the aid of saws, picks and axes they broke their way into the wrecked sleeper and rescued their fellow laborers, many of whom were groaning and yelling in agony.

Edward Sullivan was taken out first. When the ambulances came he didn't believe a doctor could do him any good, and begged for a drug to ease his brain. He died within half an hour after reaching the hospital. Coroner Hoffman was called, and will hold an inquest Tuesday at 3 p. m. None of Sullivan's relatives has been found, as he refused to tell anything of their whereabouts, although repeatedly questioned.

SULLIVAN WAS A COLLEGE MAN.

Jos. McCann, one of the injured who is at Harper hospital, and who has known the dead man for eight or nine years, says that he came originally from Washington, and that his name was Billie. Before he joined Buffalo Bill's troupe he had been with Baltimore for four years. From what

could be gathered from different sources it appears that Sullivan was a great favorite among his company and was a college bred man. It is a curious coincidence it was just one year ago that he narrowly escaped being burned to death. Half of his foot was also gone, lost in a former accident.

The rest of the men were removed one by one to Harper and Grace hospitals, one of the ambulance doctors remaining to attend to the injured left behind. All the victims were employees of the Wild West show, some of the railroad hands being hurt, as they were on the look-out and had ample time to get out of the way.

The injured were A. Burkholder, Henry D. Eastman, N. C. Mix, Thos. Kelly, George Hunt, Wm. Gilmore, John Cusick, Joseph McCann, Harry John, and Dan O'Neil.

WINDSOR, ONTARIO

A SMASH-UP.

Buffalo Bill's Wild West Show
Run Into.

One Man was Killed and Ten
were Injured.

Detroit, July 30.—A serious accident took place at Milwaukee Junction early on Sunday morning by which one man was killed and ten wounded. Buffalo Bill's Wild West show section 1, was run into by switch engine No. 1286 and train, and the car nose and the former train was crushed and pushed into and over one of the sleeping cars containing employees of the show.

All of the seventy-eight men in the sleeper were more or less injured and shaken up, but only ten were taken to the hospitals, all the others going on with the show to Pontiac.

Buffalo Bill's show played at Indianapolis Saturday and at midnight it left that city over the Michigan Central in two sections. At West Delton the first section was turned over to the Grand Trunk. It consisted of twenty-two cars, including "flats" for wagons, stock cars, four sleeping cars, owned by the show, and a canoe boat. The last of the sleeping cars, No. 56, was occupied by the canvasmen. The train was hauled across the city to the yards at Milwaukee-ave and Dequindre-st. There it backed around on the "Y" to get on the tracks running to Pontiac. Through the mistake of some employee, who is not yet known, the train was backed down the outbound track instead of the inbound, as it should have been.

The crew of the switch engine which was working on this track saw the train coming, and started to get out of the way, but in spite of the efforts

JUNE
30
1900

was a great favorite among his companions and was a wellbred man. By a curious coincidence it was just one year ago that he narrowly escaped being burned to death. Half of his foot was also gone, lost in a former accident.

The rest of the men were rendered only one to Harriet and Grace hospitals, one of the ambulance doctors remaining to attend to the injured left behind. All the victims were employees of the Wild West Show, none of the railroad hands being hurt, as they were on the look-out and had ample time to get out of the way. No injured were A. Burkholder, Henry J. Eastman, N. C. Mix, Thos. Kelly, George Hunt, Wm. Gilmore, John Cusick, Joseph McCann, Harry Button and Michael Quinlan.

July 30 / 900

T. R. SMASH.

A Fast Express Train Left Trunk at Lansing.

Lansing, Mich., July 8.—The eastbound fast express on the Grand Trunk railroad, due here at 9:35, left the tracks just as it entered the yards here tonight. Every wheel except those of the engine, baggage car and express car left the main track. Two sleepers and three day coaches were derailed. Although the train hardly wrecked no one was killed and no one injured seriously. The occupants of the Pullmans were badly shaken up and some of the day coach passengers were thrown against the ceiling of the cars.

There were nearly 400 passengers on the train. The accident was caused by a broken switch. Engineer Williamson reversed his engine immediately after the accident occurred and his prompt action doubtless saved many lives. Another train was sent for, the passengers were transferred and continued their journey.

The company's loss will be quite heavy. The trucks were knocked off front under several of the coaches

July 9
1900

Branch Stations.

Customers may purchase The Evening Record at the East End drug store, corner Glengarry Ave and Sandwich st, and A. J. Wilkinson's drug store, corner Bruce Ave and London st. Newsboys will be supplied at wholesale rates.

A FATAL WRECK.

A Freight on T. G. H. & M. Ran
Into Open Switch.

The Engineer and Fireman were
Both Killed.

Durand, Mich., Sept. 28.—Blasts
of the fire whistle, brakes of engine
whistles and hissing steam, aroused
the whole of Durand at 2:25, this
morning to witness an awful disaster.
Merchandise freight train No. 68 of
the Detroit, Grand Haven & Milwaukee
railroad ran into an open switch
at the north end of the yards and
crashed into yard engine No. 1095.
The freight engine was 1044, and both
were badly demolished.

Two men are dead and another badly
injured. The casualties:
Engineer Thos. Hamlin, of Detroit;
John Linde, fireman, of Ionia, kill-
ed.

Samuel Beck, brakeman, injured
about head and hands.

A car of sulphur in the centre of
freight No. 68 immediately caught fire
and 24 cars of valuable merchandise
were burned. The fire department
served several by hard work.
The railroad yards present an aw-
ful sight. The blame has not yet
been fastened on anybody. The crew
of No. 68 say they lit on the switch
was out. Engineer Carl Ober
waited for brakes and he and his
fireman jumped and were uninjured.
The brakeman also saw the danger and
jumped.

Engineer Thos. Hamlin and Fire-
man John Linde, of the switch en-
gine, did not jump. Hamlin fell under
the tender and his arm and leg were
torn from his body. He died at 4:30
o'clock. Linde was thrown upon the
driver and instantly killed.

Hamlin's home is in Detroit. Linden
was the famous football player of
Ionia. He was a member of the Lan-
ing champion team last season.

In a service of 14 years this is
Engineer Hamlin's first accident.

September 28
1900

TRAIN DITCHED.

Accident on the Southern Pacific at Gartner Siding.

Durand, Mich., Sept. 28.—A fast freight train collided with a switch engine to-day on the Detroit, Grand Haven and Milwaukee railroad here. Two men were killed and one was injured. The dead: Engineer Thomas Hamlin, of Detroit, and Fireman John Tindell, of Ionia. Twenty-four loaded cars were burned and both engines demolished.

September 28
1900

Hamilton Spectator

ENGINEER WAS ASLEEP.

A Small Smash on the G. T. R. at Lennox,
Mich.

Lenox, Mich., Feb. 18.—The fact that Engineer Wissman of train No. 90 dropped asleep in his cab while his train was passing through Lenox at 11:30 Saturday evening caused a head-on collision between his train and a special in charge of Conductor Thomas Harris, bound south, just outside the Grand Trunk Yards at this station. Train 90 should have stopped and backed into the switch and the conductor jumped from his train as he passed the depot. The fireman, who was a new man on this division, saw the head light of the special which was drawn by two engines, and awakened the engineer and all jolted before the crash came. The special had come to a stop and the crew escaped without injury.
The engines can all be repaired and \$5,000 will probably cover the loss.

February 18, 1901

Grand Trunk Engines.

Advices have been received at the head offices of the Grand Trunk Railway Company, that the twelve simple mogul freight locomotives now building at the Brooks and Dixon companies' shops in the United States, will be ready for delivery in about three weeks. The engines are of the "900 class," similar to the moguls built at the company's Point St. Charles shops. They were designed by Mr. Frank W. Morse, superintendent of motor power, the dimensions being as follows: Cylinders, 20 by 26 inches; total weight of locomotive, loaded, 161,197 pounds; total weight of tender, loaded, 112,000 pounds, with driving wheels sixty-two inches in diameter outside of tire; water capacity of tank, 4,500 U.S. gallons; coal capacity of tender, 20,000 pounds, working steam pressure, 200 pounds. The boilers each contain 288 tubes, two inches in diameter and eleven feet eleven inches in length, The engines are equipped with Westinghouse-American brakes and train signals.

The twelve engines mentioned in the foregoing, together with the twenty-four of the same series now being completed at Point St. Charles, will be put into service on the western and middle divisions of the system, where, by the improvements made on the roadbed, it is possible to increase the trainloads from 25 to 33 per cent.

April 3 1901

ANOTHER TROLLEY LINE.

The Detroit-Toledo Road to be an Electric One.

The Toledo News has an interview with E. W. Moore, in which he said: "The Detroit & Toledo Shore line is being constructed as fast as we can let the contracts. We have purchased the rails for this line and the electrical equipment, and we expect a suburban line from Cleveland to Detroit by the fall."

MAY 6 1901

LONG TROLLEY LINE

An Electric Road From Detroit
Across Ohio.

It Will Follow Canal From Toledo to Cincinnati.

Cleveland, O., May 7.—Detroit to Cincinnati by trolley is the latest paper achievement of the Everett-Moore syndicate of Cleveland that has had so much to do with the street and suburban railways of Detroit. The way a franchise for a trolley line from Toledo to Cincinnati was secured constitutes one of the finest pieces of work yet. The Ohio legislature granted to Mr. Fordyce of Detroit the right to construct a trolley railway system along the tow path of the Miami and Erie canal extending between Toledo and Cincinnati to propel boats.

W. H. Lamprecht and his syndicate of Cleveland capitalists recently took hold of this almost forgotten privilege to develop it. Today secret negotiations culminated in the Everett-Moore interest getting control of the grant. Lamprecht will be ousted. There is nothing in the charter to prevent the operation of a passenger or freight trolley system along the canal under the Fordyce grant, and that will be done. Tracks will be standard gauge, and there will be a trolley road clear across Ohio, the longest in the world.

Already the line between Detroit and Toledo is in a forward stage, the Everett-Moore syndicate owning this. The canal trolley company gobbled by Everett is capitalized at \$2,000,000.

MAY 8
1901

THREE MEN WERE KILLED.

Two Freight Trains on D.G.H. &
M. Come Together With
Fatal Results.

Engineer, Fireman and Brakes-
man Killed—The Smash-
up of Property a Bad
One.

BIRMINGHAM, Mich.—Oct. 18.—East
and westbound freight trains on the
D. G. H. & M. railroad came together
head-on on the curve near Maple Or-
chard, five miles west of this place,
at 5 o'clock this morning. Three men
who were riding in the first car, on
the westbound train were caught in
the wreck and crushed to death. They
were:

R. Moffatt, engineer, 215 Fort-st.
east, Detroit.

H. Luse, fireman, 144 Orleans-st., De-
troit.

Otto Nuersenberg, brakeman, Clark-
ton, Mich.

Moffatt has been in the employ of
the road 13 years. He was 32 years
old and belonged to Forest, Ont.
Luse had only been with the road
four weeks. He was 25 years old
and came from Owosso.

The wreck is believed to be due to
a misunderstanding of the train des-
patcher's order on the part of one of
the conductors, although the dense
mist which prevailed, and the fact
that the curve interfered with the
vision of the engineers may have been
contributing causes.

The wreck is the worst ever seen
in this section. Both engines were
completely ruined and are lying at
right angles to the track. An idea of
the force with which they came to-
gether can be gained by the fact that
all the spokes are torn out of the
drive wheels of the engine which was
northbound.

There were two carloads of hogs
just behind the engine and the ani-
mals were literally torn to pieces. A
score or more of the beasts were bad-
ly maimed, and their squealing could
be heard for a long distance. Webster
Bray, a Birmingham butcher, was sent
for, and he commenced the biggest
stitching match he ever engaged in.
When he had completed his task he
had put nearly 50 of the suffering ani-
mals out of their misery. There were
seven cars derailed, and traffic on the
road was blocked all morning. It is
expected to have the tracks cleared
for traffic early this afternoon.

This freight train going west was a
very heavy one and got stuck on the
steep grade, near Highland. The en-
gineer cut his train in two and took
part of it to Pontiac. He returned
for the other part and was on his way
to Pontiac with it when the eastbound
train, named Thunder, along and
struck the train with terrific force.
A wrecking train with Drs. Tibbals
and Brodie aboard came out from De-
troit.

Traffic will be blocked for half a
day.

Passenger trains are running via
Linden and Air Line to Pontiac.

October 18
1901

DETROIT TO TOLEDO.

The Electric Road Between These Points
Now Ready.

Monroe, Mich., Dec. 22.—General Manager Edwards made a short trip over the Detroit & Toledo shore line this afternoon, the power being turned on today for the first time.

Messrs. Everett and Moore and several English capitalists will make an inspection trip over the line tomorrow afternoon, arriving in Detroit about 3 o'clock. The special train bearing the party will run direct from Cleveland to Monroe, but at this point the party will be obliged to walk a distance of two blocks in order to transfer from the Toledo & Monroe Railway to the shore line.

The line will go into commission the latter part of the week.

December 23

1901

DETROIT TO CLEVELAND.

The Electric Line Now Ready for Business.

Mr. Moore, of the Everett & Moore Syndicate, along with a number of Cleveland gentlemen, yesterday made the first trip from Cleveland to Detroit by an electric line. Leaving Cleveland at 9:40 a. m., the party took it by easy stages over the Lake Shore line, which includes the recently acquired Toledo, Fremont & Norwalk road, to Toledo. It then took the Monroe & Toledo line, recently acquired from Messrs. Black, Mulkey & Fowler, to Monroe. At Monroe there was a transfer of cars, and the party then came through to Detroit by the Detroit & Toledo Shore line to Trenton, and from Trenton up via the Wyandotte & Detroit river line, arriving in Detroit at 7:50 p. m. standard time. The members of the party were entertained at the Detroit club by Vice-President Hutchins of the Detroit United Railway.
This trip is said to have been a very pleasant one. The line will be open to the public on Thursday.

December 24, 1901

EVERETT-MOORE FINANCIAL TRIALS.

The Receiver Appointed for the
D. & T. Shore Line.

The Phones More Trouble Than Electric Roads.

Cleveland, O., Jan. 6.—The committee of bankers selected to straighten out the affairs of the Everett-Moore syndicate spent today in investigating the Cleveland Electric Railway Co. and found it in excellent shape. Much time was taken up in a general discussion of the plans to reach the creditors. So far none has refused to grant an extension.

The New York creditors have not been heard from yet, and Mr. Everett will go there Wednesday to confer with the parties through whom the loans were secured, and present the situation to them. The committee is being deluged with telegrams inquiring whether this or that part of the syndicate holdings are for sale. In reply the committee announces that it has not yet formally secured control of the syndicate affairs, and could not entertain any offers if inclined to do so.

One inquiry has been made concerning the unfinished Peoples' Telephone plant of the syndicate in Detroit. In regard to this, Chairman Newcomb, of the committee said today: "I suppose capitalists would be very glad of an opportunity to snap this property up at low figures. The system as designed would cost \$1,200,000, and \$400,000 or thereabouts has been put into it, but we believe the extension of time will be granted by the creditors of the telephone interests, and that the company will be enabled to work out its own salvation."

There is some talk, however, among the committee men that the telephone interests might be sold, but the com-

January 7

1902

the creditors of the telephone interests, and that the company will be enabled to work out its own salvation."

There is some talk, however, among the committee men that the telephone interests might be sold, but the committee men say that they will not be allowed to go at a sacrifice.

RECEIVERS APPOINTED.

Toledo, Jan. 6.—Judge Barber, of the Common Pleas Court, appointed the Ohio Savings Bank & Trust Co. and David B. Cunningham, of Detroit, receivers, and they will take charge of the property. At the same time, Judge Barber granted an injunction restraining the Detroit & Toledo Shore Line Co. and its secretary George S. Stewart, from disposing of any part of its bonds. The bond of Receiver Cunningham is fixed at \$10,000, and an injunction bond of \$5,000 was required of the Strang Contracting Co., Limited, which is the plaintiff in the case, and at whose instance the receivers were appointed. David B. Cunningham lives at 68 East Alexander Avenue, Detroit, and is chief engineer for W. B. Strang.

Cleveland, O. January 6.—When shown the dispatch from Detroit stating that a lien had been placed on the Detroit & Toledo Electric Shore Line, Chairman Newcomer, of the bankers committee, said:

"The bonds to finance the road in question were some time since all

contracted for by a leading financial institution. I presume, however, that

the present difficulties of Messrs. Everett and Moore will result in temporarily delaying this deal. In any event the lien will prove of little (moment."

Monroe, Mich., January 6.—Following the order to discontinue the construction work on the Detroit & Toledo Shore Line railway and the blocking of the road with construction train cars to prevent the Everett-Moor syndicate from operating that portion of the line between this city and Trenton, comes the appointment of a receiver. Late tonight Judge Lockwood, of the Circuit Court, appointed David B. Cunningham, of Detroit, receiver, and he will take charge of the property in Michigan. In addition, Judge Lockwood granted an injunction restraining the Detroit & Toledo Shore Line railway and its secretary, George S. Stewart, from disposing of any more of its bonds. The plaintiff is the Strang Contracting Co., which entered into a contract with the Erie Construction Co. in April, 1901, for the building of the road between

January 7

1902

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of a receiver. Late tonight Judge Lockwood, of the Circuit Court, appointed David B. Cunningham, of Detroit, receiver, and he will take charge of the property in Michigan. In addition, Judge Lockwood granted an injunction restraining the Detroit & Toledo Shore Line railway and its secretary, George S. Stewart, from disposing of any more of its bonds. The plaintiff is the Strang Contracting Co., which entered into a contract with the Erie Construction Co. in April, 1901, for the building of the road between Toledo and Trenton. The Erie company transferred its obligations to the Shore line, and Strang, it is claimed, continued work until January 3, when \$258,987.19 was due him.

PHONE COS. NEARLY ALL O. K.

Cleveland, O., January 6.—Chairman Newcomb, of the committee of bankers in charge of the affairs of the Everett-Moore syndicate, said today that it would probably be two weeks before a detailed statement could be prepared showing the actual financial condition of all the various properties controlled by the syndicate. "The trial balance reports for November," said Mr. Newcomb, "indicate that practically all the urban and interurban electric railways of the syndicate are money makers."

Continuing, Mr. Newcomb said: "The syndicate controls twenty-eight district telephone companies, including the United States (long distance) company. So far as we have been able to learn, from a superficial examination, those companies are almost without exception, capable of paying fair dividends, but in many cases the earnings, and large sums in addition have up to this time been devoted to making extensions in the service.

January 7

1902

(3)

GRAND TRUNK RAILWAY MOVE

Takes Over the Detroit and Toledo Road

Ambitions to Have Great Trans-continental Line

Toledo, Ohio, Nov. 16.—In a week the title to the Detroit & Toledo Shore Line railway will be vested in the Grand Trunk Railway. The Grand Trunk railway will buy \$1,500,000 for the property, which consists, for the most part, of a double track line extending from Toledo to Trenton, Mich. To cover the extension of its lines into Ohio territory, the Grand Trunk will issue \$2,000,000 in bonds, paying for the completed portion of the Shore line the amount \$500,000, extending the remaining from Toledo to Detroit, and paying ballast for the completed portion.

The Clover Leaf is a minority party to the transaction and joins with the Grand Trunk in guaranteeing the bond issue of \$2,000,000. These bonds will be handled by an eastern trust company.

Through passenger trains over the Clover Leaf from St. Louis, Mo., will not stop at Toledo as at present, but will continue on to Detroit over the Grand Trunk's shore line railway and in like manner the Grand Trunk's south and west traffic will be routed via Toledo.

It is intimated that the Grand Trunk's London owners are ambitious to build a great trans-continent railway that will prove a formidable rival to the Canadian Pacific, the Vanderbilts and west lines and they could access to southwestern America over the Clover Leaf tracks.

January 17
1902

WRECK ON THE GRAND TRUNK.

One Man Was Killed and Several
Injured.

A Displaced Switch Said to be
the Cause.

Battle Creek, Mich., April 6.—One dead and five injured is the casualty record of a Grand Trunk wreck which occurred at Millets this morning at 3 o'clock. No. 6 east-bound passenger train had the right of way and the engine and seven cars passed through a switch safely, but the last coach and Pullman sleeper were thrown off the track and against engine No. 1147, which was attached to a west-bound extra freight. The freight engine and both cars went into a heap. A wrecker was called from Battle Creek.

Through official sources it is learned that Abraham Bernstein, of Detroit, who occupied a seat in the coach, was the only one killed. He carried a steamship passage for Europe. O. M. Maban, of Providence, R. I., was badly injured and is now at a Detroit hospital. Bernstein's body was taken to Charlotte, M. J. Orzechowski, of Chicago, received two bad scalp wounds, and J. L. Gordon, of Rochester, N. Y., was badly bruised. Frank Thomas, of Mt. Clemens, and J. L. Ziegler, of Detroit, the latter a brakeman on the passenger, sustained slight injuries. It is the opinion of those in authority that the switch had been tampered with.

Conductor Charles E. Spearer and Engineer Clark, of Battle Creek, were in charge of the passenger. Conductor James R. Burnet, and Engineer O. I. Campbell, of this city, had the extra freight. The coach and sleeper were badly damaged.

One of the trucks on the rear coach caught the points of the switch so as to run the last two cars onto the side-track, where they struck the freight engine. The engineer and fireman were examining the freight engine when the passenger was going through. They saw the two cars jump the track and escaped injury by jumping out of reach. The passenger train was going at a high rate of speed when the accident occurred.

April 7
1902

WRECK ON G.T.R. DURING A STORM

Car Blown From a Siding on to
the Main Track Near

Valparaiso, Ind.

TRAIN CRASHED INTO IT

Engineer Injured and Others Shaken
Up—Damage to Rolling
Stock.

Valparaiso, Ind., April 26.—The Grand
Trunk passenger train which left Chicago
at 8:15 last night was wrecked
eight miles east of this city, as a re-
sult of the windstorm which swept
over this section during the night. The
engineer, Robert Melrose, was seri-
ously hurt, and the fireman and mail
clerk were badly bruised.

The wind had blown a box car from
the siding over upon a main track.
The passenger locomotive crashed into
this obstruction, and shot off the rails,
followed by the baggage and mail
cars, into the ditch.

Engineer Melrose was pinned down
by the wreckage. It took the other
crewmens and the passengers two hours
to release him. Then it was found his in-
juries required immediate surgical at-
tention. The fireman and mail clerk
suffered severe contusions. None of
the passengers were seriously hurt.

April 26
1902

THE RAILWAYS.

The large engines which are used on the Grand Trunk Railway cannot run into the city of Detroit, for the reason that they cannot get under the Jefferson Avenue bridge. Change of engines is made at Durand.

Chairman M. Hayes, the vice-president of the Grand Trunk Railroad Company, has issued an order to the heads of all departments in his company, to look for "bright young men."

The news of the illness of the King was held with profound regret by the employees at the Grand Trunk car sheds at London. The big celebration or Coronation Day was at once postponed until July 1. On that day the program will be just the same as that which had been arranged for the coronation. Programs for the affair have been sent out, and the celebration promises to be a grand success.

The traffic department of the Grand Trunk Railway report their receipt of passenger traffic during the present month of June exceeded any output previous record. It is even larger than June of last year or at any time during the Pan-American Exposition.

It is said that the war in South Africa

June 30

1902

CAUSED BY WASHOUTS.

Two Men Killed and Several Injured.

Fifteen Freight Cars on Grand Trunk in Ditch.

Detroit, July 3.—At 3 o'clock this morning in the midst of a terrific downpour of rain, a doubleheader southbound freight ran into a washout a quarter of a mile north of Thomas, on the Bay City division of the Michigan Central. The two engines and 15 cars piled up in the ditch.

Engineer William McGregor of this city and a tramp, said by a companion of his to be John O'Grady, were killed. Two firemen were injured, but the other engineer escaped.

Grand Rapids, Mich., July 3.—The Grand Rapids and Indiana passenger train No. 3, which left this city at 11 o'clock last night, struck a washout at Belmont and the locomotive and several cars were piled up in the ditch but all escaped serious injury except Engineer Coleman of Grand Rapids, who was badly hurt.

Richmond, Mich., July 3.—There miles east of Richmond 15 freight cars on the main line of the Grand Trunk were ditched this morning by a washout, and there will be no more trains to-day. No one was hurt. At Armada there is reported a washout on the Grand Trunk Air Line, which will prevent trains passing to-day.

July 3
1902

Dexter, Mich., July 3.—The main line of the Michigan Central had a washout near here, but it was re-

Acquired by the Grand Trunk.

Cleveland, O., Sept. 5.—The report circulated in financial circles here, and at Detroit Wednesday that the Detroit and Toledo Shore Line, one of the Everett-Moore electric traction properties had been sold to the Grand Trunk Railroad, was confirmed here yesterday through an authoritative source. The Grand Trunk will assume all outstanding indebtedness of the Detroit and Toledo Shore Line, aggregating about \$1,500,000. The equity of the Everett-Moore syndicate from the sale, it is stated, will not exceed \$100,000. The acquisition of the Detroit and Toledo Shore Line means a great deal to the Grand Trunk. It opens up a line of connections at Toledo which is very valuable.

September 5

1902

THE RAILWAYS.

G. T. R. Has Shore Line.

New York, Sept. 11.—It was officially learned to-day that the Detroit & Toledo Shore Line, one of the properties involved in the embarrassment of the Everett-Moore syndicate in the middle west, has passed to the control of the Grand Trunk. It is stated that the Shore line was sold to the Grand Trunk some time ago, and only minor details remained to be completed before the formal transfer of the road was made.

Henry A. Everett is in the city and called on W. B. Strong at his office at 15 Wall-st and afterwards visited the office of Keene, Van Courtlandt & Co. He declined to state the object of his mission to this city, further than to say it is on syndicate business.

It is stated by one in touch with the matter in Detroit that the reason the deal was delayed was the necessity of the creditors of the Detroit & Toledo Shore Line scaling down the indebtedness from the sum of \$1,000,000 to \$1,400,000, the price the Grand Trunk was willing to pay.

September 12
1902

A GRAND TRUNK

RAILWAY SMASH

An Express Crashes Into a Freight train

No One Killed, Several Cars Were Demolished

Birmingham, Mich., October 3.—About 9 o'clock this evening Grand Trunk express train No. 18 east bound from Grand Rapid to Detroit crashed into the rear end of a local freight train stalled half a mile west of Birmingham station. The passenger train was some fifteen minutes late, and was going at the rate of forty miles an hour. The freight train was standing on a curve unable to make a switch, and the crew of No. 18 did not see it in time to stop their train. It is said that signal men had been sent out, but their warnings, apparently, were not perceived. When the engineer and fireman of the passenger saw that a collision was unavoidable, they jumped escaping with a few scratches. The engine telescoped the caboose at the end of the freight train, and climbed on top of a flat car, which stood just ahead. It was completely demolished, and half a dozen freight cars were piled in a heap, entirely blocking the track. None of the coaches on the express train were injured, and the passengers escaped with a shaking up.

Later an engine pulled the coaches back to Pontiac. The crew of the engine on No. 18, and a number of the passengers, came to Detroit on the passengers, came to Detroit on the electric cars. The entire train crew of the freight was forward working to get their train free. Had any of them been in the caboose, they would undoubtedly have been killed. Late this evening the wrecking train sent out from Detroit had not yet arrived, and in all probability the track will be blocked for twelve hours.

October 3
1902

GRAND TRUNK GOT IT.

The Detroit and Toledo Shore Line Passes to That Company.

A Detroit paper says: "Charles R. Hannan, of Council Bluffs, Ia., brother of W. W. Hannan, the Detroit real estate dealer, arrived in Detroit yesterday, and received word that the papers were signed in New York yesterday formally transferring the Detroit & Toledo Shore Line railway to the Grand Trunk railway. This is the result of negotiations extending over a period of almost three months. According to Mr. Hannan, this means that the Black-Mulkey (syndicate) will complete its electric system between Toledo and Detroit, and it was the opinion of at least one railroad man in Detroit last night that the Detroit United railway would ultimately absorb the road."

October 28
1902

THE GRAND TRUNK PURCHASE.

The delay in the sale of the Detroit & Toledo Shore line to the Grand Trunk and Clover Leaf has been owing to the difficulty of adjusting affairs of the creditors of the D. & T. Shore line, some of whom wanted cash, whereas the Grand Trunk and Clover Leaf desired to give bonds. The plan for the original deal was to have the Grand Trunk pay cash and the Clover Leaf complete its part of the deal on a bond basis, or to pay the entire amount in cash and carry Clover Leaf bonds as assets. The creditors would not agree to this, however, unless the bonds could be immediately disposed of. It is now reported that satisfactory arrangements have been reached, and an eastern trust company has been selected with which all creditors will file their claims. The amount of joint bonds for the road is placed at \$2,000,000, and it is said that a mortgage is now being prepared and that the final touches of the deal will be made within six days.

November 4
1902

TRAINMEN KILLED NEAR BATTLE CREEK

A Head-on Collision Between G.
T. R Trains

Engineer and Fireman Were
Fatally Injured

Battle Creek, Mich., Dec. 25.—In an engine collision at Benton, six miles west of this city, Engineer James Kerwin and Fireman Theodore Schlubutis of engine No. 1122 of the Grand Trunk road, were tonight instantly killed and Engineer Brown and Fireman Burkhardt of engine No. 911 were perhaps fatally injured. The engines collided head-on while going at a speed of 40 miles an hour and the debris was piled high upon the track.

The west-bound train was a Grand Trunk freight and at Cassopolis it was found that the engine was unable to pull the load and Battle Creek was telegraphed for an additional engine. Two light engines were immediately coupled together and sent out to meet the incoming freight.

In some way the orders became mixed and at Benton the two light engines met the freight engines head-on and the frightful wreck resulted. The debris of the engines was piled high upon the track and beneath it were buried the bodies of the engine crews. The locomotives were converted into a mass of twisted steel. Aid was immediately sent out from Battle Creek and about 7 o'clock the body of Fireman Schlubutis was recovered from the wreckage. Search was continued for the body of Engineer Kerwin, but it was not recovered tonight. These two men comprised the crew of one of the engines sent out from Battle Creek to pull in the freight. Kerwin was soon to have married Miss Mattie Randall, who is prostrated by the news of his death. Schlubutis leaves a wife and family. Both men resided at Battle Creek. The engineer and fireman of the freight engine are severely injured, and it is not known whether they will live. No other people were caught in the wreck.

December 26

1902

ANOTHER G.T.R. SMASH

Two Freight Trains Collide in Detroit

Two Grand Trunk yard engines, each drawing a train of freight cars, came together about 8 o'clock last night at the Woodbridge street crossing on Dequindre street, Detroit. Four freight cars were piled up in an imposing mass of wreckage. The crews of both engines escaped by jumping before the impact came. Both engines were badly damaged. The tender behind No. 1271 was driven up through the cab of the engine, raking off the top of the cab. The pilot of the engine crashed through the end of the tender attached to engine 1266, splintering the heavy timbers like matchwood. The head of engine 1266 was imbedded deeply in the forward end of a box car, while the body of the car was lifted from its trucks and driven up over the smokestack of the engine, where it hung. The trucks of the first and second cars were a complicated mass of iron. The first car hung suspended over its forward trucks, while the second box car, also empty, was lifted from its trucks and driven back over the edge of an open car loaded with pig iron and into the front end of the box car behind. The financial loss to the railway company will probably not exceed \$3,000 or \$4,000. No person was hurt.

December 30
1902

Price One Cent.

THEY TOGETHER WITH CRASH

Three Grand Trunk Engines in Collision

Number of Train Hands Injured or May Die

Mt. Clemens, Mich., March 8.—Three engines came together with a terrible crash before daylight this morning at the lower end of the Grand Trunk yards in this city. The cries of injured trainmen pinned in the wreckage mingled with the hissing of escaping steam. Engines No. 1041 and 1021 of a heavy freight train, east bound, were shunting cars onto a siding when engine No. 1105 and way out, running at the rate of 25 miles an hour, came snorting out of the fog and darkness and dashed into them. The weather was so thick it was impossible to see the length of a locomotive ahead, and neither Engineer Lew Neal nor Fireman John Whiting, of No. 1105 saw the engines on the main line until almost upon them.

In the second that intervened before the collision, they had jumped from the ditch beside the track without any slight injuries. Engineer R. H. Johnson and Fireman F. A. Reed of No. 1021, the rear engine of the double-headed train, was less fortunate. They had no opportunity to jump as the grinding crash was the first intimation of danger. Engineer Johnson was hurled through the windows of the cab and when found was lying on the running board of the engine, insensible. The latter had reversed itself with a lurch and penetrated his thigh. Fireman Reed fared even worse. He was caught in the broken timbers of the cab and received internal injuries which it is thought will prove fatal.

The first grey streaks of early dawn revealed an awful spectacle. The destruction of the three locomotives was almost complete. Cab, tenders, trucks and stacks were thrown together in a shapeless mass of torn and twisted steel. In the hazy light they looked like some great uncouth monster, which had hurled themselves at each other in the darkness and were locked together in a grip of death. A shivering crowd of ghostlike figures gathered on the unusual scene and the flittering lanterns of the wrecking crews completed the weird effect.

OFFICIALS ARE RELIEVED
The railway officials and other employees are recent as to the responsibility of the wreck. It appears from what information is at hand that the incoming train in charge of Conduc-

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"was won through on the tracks," yards in [redacted] city. The cries of injured trainmen, pinned in the wreckage mingled with the hissing of escaping steam.

Engines No. 1011 and 1021 of a heavy freight train last bound, were shunting cars onto a siding when engine No. 1105 and water car running at the rate of 25 miles an hour, came shooting out of the fog and darkness and dashed into them. The weather was so thick it was impossible to see the length of a locomotive ahead, and neither Engineer Lew [redacted] nor Fireman John Whiting, of C. O. 1105 saw the engines on the main line until almost upon them.

In the confusion that intervened before the collision, they had jumped bringing up the ditch beside the track with only slight injuries. Engineer R. D. Johnson and Fireman A. Reed of the rear engine of the double-headed train was less fortunate. They had no opportunity to jump as the grinding crash was the first intimation of danger. Engineer Johnson was buried through the windows of the cab and when found was lying in the running board of the engine, insensible. The latter had revolved itself with a lurch and penetrated his thigh. Fireman Reed fared even worse. He was caught in the broken timbers of the cab and received internal injuries which it is thought will prove fatal.

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OFFICIALS ARE REACTIVE

The railroad officials and other employees are silent as to the responsibility of the wreck. It appears from what information is at hand that the incoming train in charge of Conductor or Cochran, was running on orders which gave the right of way. That train, lying at the yard, was in charge of Conductor Bentley and he had been informed of the approach of the light engine. At the time of the accident Conductor Bentley was not with the part of his train engaged in switching, but was at the depot getting orders from the night operator. As he stepped out of the station he is said to have remarked that his engines ought to be getting out of the way.

Engineer Johnson, whose home is 397 Fort Street east, Detroit, in addition to the wound in his thigh is suffering from a compound fracture of the ankle. He will recover unless pod Poisoner sets in. He and Fireman Reid of Davosso were removed to a hospital in this city. The latter underwent an operation to-day. His spine is injured and it is feared he will not survive the night. The financial loss entailed by the wreck cannot be learned.

MARCH

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1903

22 KILLED ON G. T. R.

Destructive End-on Collision of Two Circus Trains.

About 40 Persons Injured—Bodies Mangled Beyond Recognition—
Detective Air Brake the Cause of Accident.

Durand, Mich., Aug. 7.—One of the most appalling railroad accidents in the history of Michigan occurred here at 9 o'clock this morning when one train of the Wallace Bros. circus crashed into another one-half mile west of the Durand station.

The dead so far number 22. Most of them are canvas men and canvas employees of the circus, but three of the 22 are widely known in Michigan.

All of the injured are at the Richlawn hotel, which has been turned into a temporary hospital. None of the Wallace brothers were injured. Among the dead are:

A. W. Large, of Battle Creek, formerly of Detroit, chief detective of the Grand Trunk line west of the Detroit river.

James McCarthy, Grand Trunk trainmaster, of the division between Battle Creek and Port Huron.

Frank Thorpe, Wallace Bros. chief trainmaster, whose home was at Dundee, Mich.

John Purcell, boss carman, Perry St. Chair, boss of reserve seat gang; home unknown.

G. Thomas, one of the stars game, home unknown.

Lafe Carlson, six-horse driver, home, Columbus, O.

John Lear, boss of ring stock, home, Springfield, O.

Andrew Howard, carman, home, New York.

Robert Rio, harnesser, home, unknown.

George Smith, blacksmith, home, unknown.

Charles Sands, driver, home, Peru, Ind.

Joseph Wilson, driver, home,

Pittsburgh, Pa.

W. J. McCoy, carman, home, Columbus, O.

James F. Folsom, of Detroit, speci-

al officer of the Grand Trunk, is among the injured, who numbered about forty. Mr. Folsom's left shoulder has been dislocated and his breast bruised. His condition is considered serious.

The cause of the collision was the breaking of the engine of the first train out of order and failing to stop when the engineer saw the light of the first train, which had come to a standstill. Accidents seem to be too blame.

This is how the accident occurred. The Wallace circus trains on the Grand Trunk line have a habit of doing the circus round trip to Toledo, Ohio, via the Toledo-Chicago line, and have been on schedule all day.

The circus was travelling west on the Grand Trunk main line. The two trains left Charlotte about midnight or perhaps a little later according to the tales of the railroad. The second train kept well clear behind the first train.

When the first train passed the Durand yards half a mile from town it stopped as the engine, a quiet, red locomotive, was pulling along on the road and the engine was off.

When the second train came along in full on hour the first train was still on the main track in the rear. The red detector signal on the rear car was burning steadily. The engineer on the second train, however, saw the red light in time to stop his train before it reached the first train. In the air between the two trains all hell broke loose.

But the air whistle continued to blow. The engineer, unable to make out what was the trouble, and in great alarm, drove his train the full distance without any care for the first train, and seven cars of the first train, and fifteen cars of the second, ran into each other. The two trains exploded with terrific violence.

Grand Trunk to Page 13

August

7
1903

KILLED ON G.T.R.

(Continued from Page 1.)

Many of the killed were crushed while asleep. They never knew what had happened. Some of the natives are organized and munitioned that they cannot be recognized. The bodies are buried in one morgue here. It is a spotless place that freezes the blood.

One elephant was killed, also two caravans and a \$1,000 bloodhound. A great many other animals were hurt. Some of the animals escaped from the traps.

The scene in the Grand Trunk yards was appalling. The wreckage of the machine and care, which were strewn together with the skins of the injured victims and the following of the wild animals made aughing.

After a terrible combination of fire and smoke, the smoke before it, the smoke after it, the smoke from the burning of the animals, a fearful mixture of smoke and gas.

More and more men die every day. The natives are now afraid to go near the scene of the carnage.

There is no place to bury the dead. The natives have been forced to leave their homes and are scattered about the country.

August

7

1903

August 7 1903

so all aircraft have sufficient engines turned out

the first time, and the last of the
old ones.

A HEAD-ON COLLISION

A Serious Wreck on Grand Trunk a Mile West of Vernon, Mich.

THERE WAS NO ONE KILLED

But a Number of Passengers Were Badly Shaken Up—
\$10,000 Damage Done

Vernon, Michigan, Dec. 3.—What looks like a case of disobedience of orders on the part of a train crew resulted in a serious wreck on the Grand Trunk railroad, one mile west of this station, at 2 o'clock this morning, when two freight trains came together head-on. A dozen cars were ruptured to kindling, and the locomotives, Nos. 1129 and 1083, ran half way through each other, and when pulled apart will be fit for nothing but the scrap heap. Fortunately no one was seriously hurt.

When the westbound train reached Vernon orders were awaiting it to stop here until the eastbound freight arrived. It is claimed the engineer thought he could make the next station, Corunna, and started out. They had gone but a mile when the east-

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\$10,000 Damage Done

Vernon, Michigan, Dec. 3.—What looks like a case of disobedience of orders on the part of a train crew resulted in a serious wreck on the Grand Trunk railroad one mile west of this station, at 2 o'clock this morning, when two freight trains came together head-on.

A dozen cars were pulled to kindling, and the locomotives Nos. 1120 and 1083 ran half way through each other, and when pulled apart will fit for nothing, but the scrap heap. Fortunately no one was seriously hurt. When the westbound train reached Vernon orders were awaiting to stop here until the eastbound freight arrived. It is claimed the engineer thought he could make the next station, Corunna, and started out. They had gone but a mile when the eastbound thundered around a bend. Seeing that a collision was inevitable, both engine crews jumped, and escaped with a few bruises. In the middle of the westbound train was a car containing 10 men employed in bridge work on the road. They were sleeping at the time of the collision and were thrown high in the air, and were thrown high in the air, and were seriously injured, but none so seriously hurt.

A WRECKED ENGINE is laid at work

and it is believed that the engine will

be cleared by the Michigan Central

in the near future.

The engine was running over the

switch track, and the load carried

over the bridge was scattered at

the time of the accident.

1904

December 8

FOUR MEN WERE KILLED

Trainmen Met Sudden Death Near
Pewamo, Mich.—Train Ran
Into Washout.

Grand Rapids, Mich., June 7.—Four men on a Grand Trunk construction train were killed near Pewamo yesterday afternoon about five o'clock by derailment of the train. The dead are: W. G. Everett, engineer, Detroit, instantly killed; Albert Carl, foreman, St. Johns, Mich., killed outright; C. W. Crangow, engineer of pile driver, Detroit, left arm torn off, died soon after being taken out; J. E. Graham, bridge foreman, Grand Rapids, caught under wreck and terribly mangled, deaf when taken out. S. J. Lawler, the conductor of pile driver, of Durand, was badly injured, his chest being crushed.

The construction train of four cars, drawn by engine No. 1104, left Durand at five o'clock, bound west, to repair washouts on the road. There were about 100 men and a full equipment of apparatus. When near Pewamo, the train suddenly plowed into a washout 100 feet long. The entire train was ditched. The engineer and one of the head men of the construction train were killed outright, two died of injuries after being taken from the wreck and one received such injuries that his recovery is doubtful. The remainder of the crew escaped. The derailment will completely block traffic west of Pewamo for some days.

JUN 7
1905

13 INJURED IN G.T. WRECK

Three Cars Ditched Near Flint, Mich. Going 60 Miles an Hour

Flint, Mich., June 9.—Running at the rate of 60 miles an hour, the westbound Grand Trunk train No. 3, known as the "flyer," was ditched seven miles east of the city yesterday afternoon, and 13 people were injured, two of whom may die.

It is now said that big hats give women headaches. This story was probably started by somebody who had to sit behind a sky seat in a church or at a theatre.

A woman always admires a pretty face—if the face is hers.

June 9
1905

G.T.R TO SAGINAW

A Branch Will Likely be Built to That City From Ashley Mich.

Saginaw, Mich., Sept. 28.—Chief Engineer T. T. Irving and Traffic Manager Chas. Clark, of the Grand Trunk, arrived in this city today to meet with Saginaw business men in regard to the building of a line from Ashley to Saginaw to connect with the Grand Trunk to Muskegon. They were taken about the city this afternoon in automobiles, and this evening were entertained at the East Saginaw club by the transportation committee of the board of trade. The building of a line to Ashley would give the Grand Trunk a short line across the state and at the same time form an important adjunct to Saginaw's shipping facilities as a connecting link in a direct line between east and west. Once built, it is certain to prove of great value.

June 29, 1905

RAN INTO A SWITCH.

Five Persons Severely Injured, Two Perhaps Fatally.

Durand, Mich., March 18.—The Atlantic express, on the Grand Trunk Railway, due here at 5:55 a. m., from Chicago, en route to Port Huron and the east, and running late, ran into an open switch at Bancroft, five miles from here, Saturday, and struck a freight train.

Five persons were severely injured, two of them perhaps fatally. Engineer A. F. Schram and Fireman Ernest Cowan, both of Battle Creek, Mich., suffered broken limbs and severe scalds, and may die. L. V. Smith of Dowagiac and Mrs. D. Shook and Miss Ruth Shook of Lansing, her daughter, were severely scalded, but are not thought to be fatally hurt. A number of other passengers received minor or injuries, but were able to proceed east on a later train.

MARCH 18
1907

One Killed In Wreck.

Dearborn, Mich., Aug. 30.—Rushling
yesterday at a rate of 60 miles an hour
in a rear trunk express, running
from Chicago to Port Huron, collided
with the rear end of a work train at
about yesterday morning. Mr.
John Brush, of Battle Creek,
was instantly killed and three others
were injured.

The accident occurred without
warning. Brush attempted to jump
out of the printed between the cab and
front of his locomotive. James McClellan,
enginer, also tried to jump
but was caught in the wreckage and
killed.

The other two injured were John
McDonald, fireman on the engine, and
John Murphy, train, and D. H. Ruthven,

August 30
1909

IMPORTANT RAILWAY DEAL.

President C. M. Hays of Grand Trunk Buys Missing Link.

Montreal, Dec. 1.—Chas. M. Hays, president of the Grand Trunk railway, yesterday, bought a railroad right-of-way yesterday was beating it across the Canadian border.

Mr. Hays said that the road he had purchased was only a little one, a hundred feet wide. Yesterday

he bought the Pontiac, Oxford & Northern and it is in N. Michigan," said Mr. Hays. "That connects with the Grand Trunk at Pontiac. I cannot say for certain, but we are taking over all the obligations of the railroad, and will pay it sum in cash. It will not take more than two years to issue more stock or to buy out the Grand Trunk."

Mr. Hays said that there is only 400 miles of the G. T. P. from Winnipeg to the Pacific Coast, either partially or wholly owned by him. But he hoped to be through with the job in three years.

Mr. Hays did not figure out in Canada just what effect the new American railroad is to have on us," said Mr. Hays. "It is too early to tell." —

December 1

1909

REAR-END COLLISION OCCURS NEAR DURAND

Grand Trunk Express Train Having
ing Passenger Killed in The Collision
will Make Late

Durand, Mich., August 25. Fifteen
12 persons were killed and thirty-four
injured last night shortly after 9 o'clock
when Grand Trunk passenger train No. 2
bound east, crashed into the side of the
train No. 14 on the main line track 8 miles
east, near Durand.

No. 14 stopped for passengers, and Fred C.
in charge of Conductor George E. J.
gineer Spencer, plowed his way through
through the rear platform of No. 2.

About 20 passengers were saved in the

car, and all are reported dead, injured or

missing.

The wreckage caught fire and several
the collision, and the passengers all
wounded, pinned in their seats, struggled
to escape the flames, though no broken bones.

The torso of a man, taken from the
os, was brought here. An instant before

others were burned beyond recognition.

The work of rescue was difficult, with
rescuers, some sent from Durand, being
kept away from the burning wreckage by
the flames.

It is reported that the express and local
trains, except the engine, a green, were
strike-breakers, held over from the recent

strike.

A mass of charred remains, though
burned jewelry lies on a long, iron
stretcher in University Hospital.

The coroner believes that the

presents at least four hours, his identifi-

cation is impossible. The teeth of all

ing have been scattered in various

August
25
1910

END-COLLISION OCCURS NEAR DURAND

Front Express Train Hits Standing Pullman—Sleep Car Passengers Killed in Their Berths—State Officials Will Make Investigation.

in the hope of finding a bit of paper, a piece of jewelry that will help to establish the identity of the victims, but up to 10 o'clock this morning the search had been futile.

Word from the scene of the wreck is that of the estimated number—20 who were in the ill-fated coach, only seven have been accounted for. Their names could not be learned, but it is reported that they are, for the most part, badly injured.

"If the Grand Trunk had been a little more prompt in fulfilling its promises to its former employees the wreck would probably not have occurred," said R. M. Branton, president of the Brotherhood of Trainmen in Detroit. "The Grand Trunk agreed to take back all of its old men within 90 days when the strike closed. It has re-employed a number of freight men, but a great many passenger express are still idle, and it looks as if the road was delaying until the last minute to take them back.

"The crew of the wrecked passenger train was evidently inexperienced."

Lansing, Mich., August 25. Chairman Glasgow, of the state railway commission, said today that the Grand Trunk wreck near Durand will be made the subject of a rigid investigation. An inspector is now at the scenes of the accident. He will return this afternoon and make a report, which will be made public.

August 25, 1910

FATAL GRAND TRUNK COLLISION AT SAGINAW

Freight and Work Trains Crashed Together and Three are Dead.

Saginaw, Mich., Feb. 7.—A Grand Trunk railway freight train and a work train collided near here yesterday in a snow and sleet storm, killing foreman Lewes, of the work train crew, brakeman Krueger, of the freight, and an unknown man, and injuring several others.

February 7

1914

Sault Ste Marie Star

MARCH 3 1914

James Green, 48, Chicago, trainman, sustained injuries of which he will die. Marley Burns, Chicago, switch-man, who attempted to flag the on-coming passenger train, was pinned under the debris and his left leg crushed off. Two passengers suffered painful bruises.

In Chicago, when a
train was delayed, two men
were injured.

GATEMAN BLAMED FOR STREET CAR SMASH IN DETROIT

Valentine Showski, G. T. Employee, Arrested by Police.

On the shoulders of 65-year-old Valentine Showski, \$35 a month gateman employed by the Grand Trunk railroad, the state of Michigan will attempt to place responsibility for the fatal street car smash in Detroit early today that caused the death of eight persons and injury to 36. At least three of the injured will die.

Showski was arrested at the Grand Trunk depot this morning after he had fled from the scene of the accident. Witnesses told Assistant Prosecutor Speed that Showski failed to lower the street gates at East Forest avenue and the Grand Trunk crossing, where a southbound Grand Trunk freight side-swiped a Crosstown car bearing nearly a hundred passengers shortly after midnight today.

Car Thrown 15 Feet.

The car was thrown 15 feet from the track by the impact and partially overturned, hurtling passengers under the wheels of the still moving freight.

At the county morgue, identification of the victims was impossible early today. All bodies were so badly mangled that it seemed improbable that any could be recognized by friends or relatives. One unidentified woman and a three-year-old girl were among the dead.

October 2
1916

REMOVED A RAIL TO WRECK A G.T.R. PASSENGER TRAIN

Flint, Mich., Oct. 29.—A Grand Trunk passenger train, bound from Port Huron to Chicago, was derailed near Elba, Mich., last night, when persons for whom a sheriff's posse are searching removed a rail from the track. The engineer was able to stop the train in time to slacken speed, and the coaches merely sheered into the ditch without great damage.

October 29
1921

KNIGHTS TEMPLAR KILLED IN WRECK

Four Members of Order, Includ-
ing Two of Crew, Die in
Michigan Derailment.

THIRTY OTHERS INJURED

Cars Carrying Commanderies to
the State Conclave Are
Telescoped.

New York Times
June 6, 1925

DURAND, Mich., June 5.—Four persons were killed and about thirty others, members of various Knights Templar commanderies of Western Michigan, were injured, when a special train on the Grand Trunk railroad was derailed two miles west of here this morning. The train was made up at Grand Rapids and was carrying Knights Templar to the State convention at Flint.

The cause of the accident has not yet been determined. The dead are:

PEARBOLE, FRANK, Durand; engineer.

PARKER, JOSEPH, Durand; fireman.

WELDON, H. J., Ionia.

FANNING, JAMES, Grand Rapids; newsboy.

Among the injured are W. H. McDerry, Commander of Ionia Commandery; W. L. Willoughby, Belding;

Charles F. Gilden, Portland; J. F. McElroy, Ionia; William Pearce, Ionia, and Harry McLean, Ionia. All are being cared for here.

All of the dead were members of the order. Parker, a long-time employee of the railroad, was fireman for the day only, having been made a member of the crew so that the train would be entirely manned by Knights.

The Templar special left Grand Rapids at 7:30 o'clock this morning with about eighty Knights Templar aboard. Additional passengers were picked up at Ionia, St. Johns, Owosso and other points. The train, traveling at about 45 miles an hour, carried eight coaches besides the baggage car. Most of those injured were in the Ionia coach.

The locomotive toppled over on its side to the right of the track, while the baggage car and first coach, partially telescoped, were thrown around at right angles to the left of the rails and across to the tracks of the Ann Arbor Railroad, which parallels the Grand Trunk at this point.

June 6
1925
New York
Times

Train Jumps Track, Hits Depot; Boy of 13 Killed, 12 Are Injured

Lansing, Mich., Oct. 7 (AP).—A 13-year-old boy was killed, and twelve others were injured, some seriously, when a speeding Chicago-to-New York Grand Trunk freight train ripped up tracks and wrecked one end of the main depot here late this afternoon.

Plans that others in the station might have been trapped in the wreckage were lessened as hastily summoned rescue crews, including the state policemen, reported finding no more dead or injured. The dead: James Smith, 13, Lansing.

All the injured were on the station platform or in the depot when several boxcars, which had buckled, hurtled into the depot.

Wrecking crews began clearing the tracks downtown with damaged refrigerator cars loaded with perishable goods. Grand Trunk officials said traffic meanwhile would be rerouted over Pere Marquette lines.

The dead boy had been standing on the station platform waiting to sell magazines aboard a passenger train which had been due to arrive fifteen minutes later. Witnesses said the engine and

four box cars of the train had crossed the South Washington Avenue intersection near the downtown business section before the accident occurred.

Then the fifth, they said, rose up and those behind "cracked like a whip," derailing thirty cars which were strewn along the right-of-way. Those nearest the station were wrecked.

One end of the depot was smashed as though it had been bombed and the railroad control tower at the street intersection was torn down.

Grover Hartley, tower signalman, said he saw the cars buckle and leap to safety seconds before one crashed into the two-storey structure.

The passenger agent, Leslie E. Buck, said he heard the crash and dropped to the floor. Just as the side of the station caved in, one version of the accident was that a rail had divided near the depot. Another was that a wheel struck on one of the cars and broken. Full reports from two Lansing hospitals, to which physicians had been summoned to care for the injured, indicated that few of those admitted were seriously injured.

October 8, 1941

GRAND

TRUNK

WESTERN

DIARY

RAILWAY AGE GAZETTE

December 27, 1899

On the Grand Trunk near Durand a rear end collision occurred of a freight train, the engineman was killed and three trainmen were injured.

R.A. December 27, 1899, p. 74.

January 2, 1900

Pontiac, Oxford and Northern near Pontiac Michigan a mixed train was derailed by a broken rail and the passenger car was overturned. Three passengers were injured.

January 20, 1900

At six o'clock in the evening on the Grand Trunk at Port Huron, Michigan an empty passenger train moving backward collided with a locomotive which was standing on the main track doing slight damage. A brakeman which was standing on the rear car of the passenger train and the engineman of the standing engine were killed. The engine was without tail lights.

January 27, 1900

On the Grand Trunk near Edwardsburg Michigan the locomotive of a freight train was wrecked by an explosion of its boiler. The engineman, Conductor and two other persons were injured.

R.A. March 9, 1900, p. 152.

July 8, 1900

At nine o'clock at night on the Grand Trunk at Lansing Michigan an eastbound passenger train was derailed at a switch and two passenger cars were overturned. A number of passengers were injured but it was said none of the injuries were serious.

July 29, 1900

At 4.00 AM at Milwaukee Junction, Michigan a Circus Train being backed through a Wye from the Michigan Central Railway to the Grand Trunk Railway collided with a freight train of the latter railroad wrecking a car in which were circus employees who were sleeping. Nine of the occupants of this car were injured, two of which fatally.

September 28, 1900

On the Detroit, Grand Haven and Milwaukee Railway at Durand Michigan a collision occurred between a freight train and a switching engine. The engineman and the fireman were killed and one brakeman was injured. The wreck took fire and twenty-four loaded cars were burned up.

February 7, 1902

At Granger, Indiana a passenger train of the Grand Trunk collided with a passenger train of the C. C. C. & St.L. at the crossing of the two roads knocking the GTR engine off the track and wrecking the station building. It was said that a snow-plow had just passed through on the C. C. C. & St.L. a short time before and had broken down the gate at the crossing which should have warned one of the one or the other of the collided trains to stop. One engineer and one conductor were injured.

R.A. March 28, 1902, p. 227.

February 23, 1902

On the Chicago and Grand Trunk Railroad at Evergreen, Illinois a wrecking train was derailed and the engine and two cars were ditched. One employee was killed and two were injured. The wreck took fire but the flames were soon extinguished.

April 6, 1902

On the Grand Trunk at Millets Michigan a eastbound passenger train No. 6 was derailed at a switch and two passenger cars fell against the locomotive of a westbound freight standing on a sidetrack. The cars and engine were badly damaged. One passenger was killed and three passengers and one trainman were injured.

RAILWAY AGE GAZETTE

April 25, 1902

At eleven o'clock at night at Haskell's, Indiana a passenger train collided with a freight car which had blown out from a side track by a high wind and the whole train was ditched. The engine was overturned and the engineer and the fireman were both injured. Two of the trainmen and several passengers were injured.

May 21, 1902

On the Grand Trunk at Mishawaka Indiana a westbound passenger train running a high speed was derailed and seven cars were ditched. The derailment is believed to have been caused by a broken truck.

December 25, 1902

A collision between a westbound freight train and two empty engines coupled together, backing eastward, these two engines having been sent to the assistance of the freight train which had become stalled on account of some difficulty with the engine. The three locomotives were wrecked. One engineman and one fireman were killed and two other trainmen were injured probably fatally.

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December 25, 1902

A collision between a westbound freight train and two empty engines coupled together at Benton Michigan , backing eastward, these two engines having been sent to the assistance of the freight train which had become stalled on account of some difficulty with the engine. The three locomotives were wrecked. One engineer and one fireman were killed and two other trainmen were injured probably fatally.

RAILWAY AGE GAZETTE

June 8, 1905

Davidson, Michigan passenger train No. 3 was derailed by the spreading of the rails and three cars were ditched. Eleven passengers were injured one of which was fatal.

RAILWAY AGE GAZETTE

July 15, 1906

Holly Michigan a freight train which had been stopped at the crossing of the Pere Marquette was run into at the rear by a following freight train drawn by two engines and one man was fatally killed.

October 22, 1927

GTW- A contract has been let to W. E. Lennanne for the construction of a grade separation structure at Joseph Campau Avenue Hamtramck, Michigan.

August 1927 p. 458

Proposed acquisition by the Grand Trunk Western Railway The ICC approved the acquisition of the Muskegeon Railway and Navigation Company by the Grand Trunk Western Railway and the Toledo Saginaw and Muskegeon Railroads. The Muskegeon Railway and Navigation Company operates a terminal railway at Muskegeon and Muskegeon Heights Michigan. For freight service only.

July 14, 1928 p. 88

A contract has been awarded to the Davis-Stuntz Company of Detroit, Michigan for the construction of additions and alterations to the 25 stall enginehouse at Elsdon (Chicago) Illinois.

June 30, 1928 p. 1535.

GTW (Detroit Grand Haven and Milwaukee) a contract for the construction of nine miles of new double track line between Royal Oak Michigan and Birmingham has been awarded to the Nelson Construction Company of Chicago at a cost of \$587,000.00

January 21, 1928 p. 213

Detroit Grand Haven and Milwaukee Railway has applied to the ICC for authority to construct a relocation of its existing line between Royal Oak township and Bloomfield Township, Oakland Court, Michigan 8.88 miles and to abandon its present line of 9.1 miles between the same points.

April 28, 1928 p. 989

Detroit Grand Haven and Milwaukee Railway will receive bids until noon May 11th for grading approximately nine miles of double track railway extending north from Royal Oak Michigan.

June 23, 1928 p. 1463

GTW- A contract for the construction of additions and alterations to the 40 stall enginehouse at Durand Michigan has been awarded to the Davis Stuntz Company of Detroit Michigan.

April 13, 1929 p. 867.

GTW- A contract for the construction of the uncompleted section of the Belt Line around Pontiac Michigan has been let to P. T. Clifford and Son of Valparizo Indiana. The cost of the work which involves the construction of 6.5 miles of double track is estimated at \$1,500,00.00

September 14, 1929

A contract has been let to Ogle Construction Company of Chicago for the construction of a 300 ton electrically operated reinforced concrete coaling station and sand plant at Pontiac Michigan.

November 30, 1929 p. 1310

GTW- The ICC has authorized the company to operate by trackage rights into Muskegeon Michigan.

January 1930, p. 16.

The Grand Trunk Western Railway to operate under trackage rights into Muskegeon Michigan over the Pennsylvania Railroad tracks from Kinney Michigan to Muskegeon Heights 26.5 miles over the Toledo Saginaw and Muskegeon Railway to Muskegeon terminal.

GRAND

TRUNK

WESTERN

DIARY

CANADIAN RAILWAY
AND MARINE WORLD

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The London Evening Gazette, London, Eng., of Jan. 11, says: "With reference to the proposed scheme for reorganizing the C. & G.T.R. Co., the trustees have announced that they have obtained the approval of holders of the majority of the 1st & 2nd mortgage bonds, & that receivers have been appointed in preference of instituting the scheme into effect. Bondholders who have not yet approved of the scheme are requested to deposit their bonds with Glynn, Miller, Currie & Company, who will also retain their application to be made to the London Stock Exchange for a quashing of the trustees' certificates, which carry interest at 4 per annum from Jan. 1. Bullets are informed by A. Keyser & Co. that they deny the statement of the Cr. T. R. R. Co. of Canada that the reorganization committee holds a majority of both 1st & 2nd mortgage bonds, as far as private bondholders are concerned. This Cr. T. R. R. Co. has put its own

JANUARY 1900

THE RAILWAY AND SHIPPING WORLD.

Chicago & Grand Trunk Finance.

1990
July

at 125 lbs. per inch. The dynamo & air compressor are in the boiler house. The entire plant is lit with incandescent lights. The copper wires for the electric lights are encased in a $\frac{1}{4}$ -in. pipe all over the engine house. The foreman's office, store room & engineer's waiting room are in a separate building, 75 x 22 ft. When the engines come from their trains they come by the coal chute, which has 32 pockets, take coal, then get sand from an overhead bin, then to the cinder pit, of which there are 2 side by side, with a track between them for the cinder gondolas, then across the table, a 70-ft. one, & on into the house. When they go out to their trains they pass out on another track, & are not held by the incoming engines. The cinder pits have a bar of iron 4 x 1 in. on each side near the top supported by brackets, which makes a railway on which the ash buckets are moved along to the center of the pit, where an air hoist lifts the buckets of ashes up over the gondolas & they are dumped. The cinder house extends over both cinder pits. The cars of coal are drawn up on the coal chute with a cable passing over pulleys at the end of the building & attached to a locomotive on the tracks below; 4 cars can be pulled up at once. In the end of the coal chute is located the sand house, with drier on the ground floor. From there the sand is elevated to the bins above with air pressure. The storage bins for the fresh sand hold about 500 yards. In the way of running repairs there will be enough machinery to do considerable light work. There is one drop pit which will take out a pair of drivers or truck wheels. As this is a terminus of both the Middle & Detroit divisions, a large number of engines will be handled here daily. The old roundhouse at Ft. Gratiot, of 10 pits, will now be used for a repair shop.

MARCH 1900

P 71

The two-story brick residence at 101 Main Street, which was recently completed, is now in use. Each small bay is 11 ft. 30 in. long, with brick sides & a concrete bottom, treated with coats of lime. Steepm pipes the full length of the hills. It is a little over 76 ft. from the docks across the houses to the other outside wall, so

the longest distance can be hundred & have plenty of room to go around them. The hill side, chair turned, requires a large amount of work to get around them. The hill side, chair turned, requires a large amount of work to get around them. The hill side, chair turned, requires a large amount of work to get around them.

Two lines of 1-in. water pipes, 1100 feet long, will be laid down to the water well for washing out the filter tank, to be used for washing out the pipes.

Sixty-five in these pipes, 2-in. in diameter, laid down to the water well for washing out the pipes.

Twenty lines of 2-in. pipe, 1100 feet long, will be laid down to the water well, one for each of the other four unpressed wells, with pipes 1-in. in diameter, 1000 feet long, for washing out the pipes.

Two lines of 2-in. pipes, 1100 feet long, will be laid down to the water well, one for each of the other four unpressed wells, with pipes 1-in. in diameter, 1000 feet long, for washing out the pipes.

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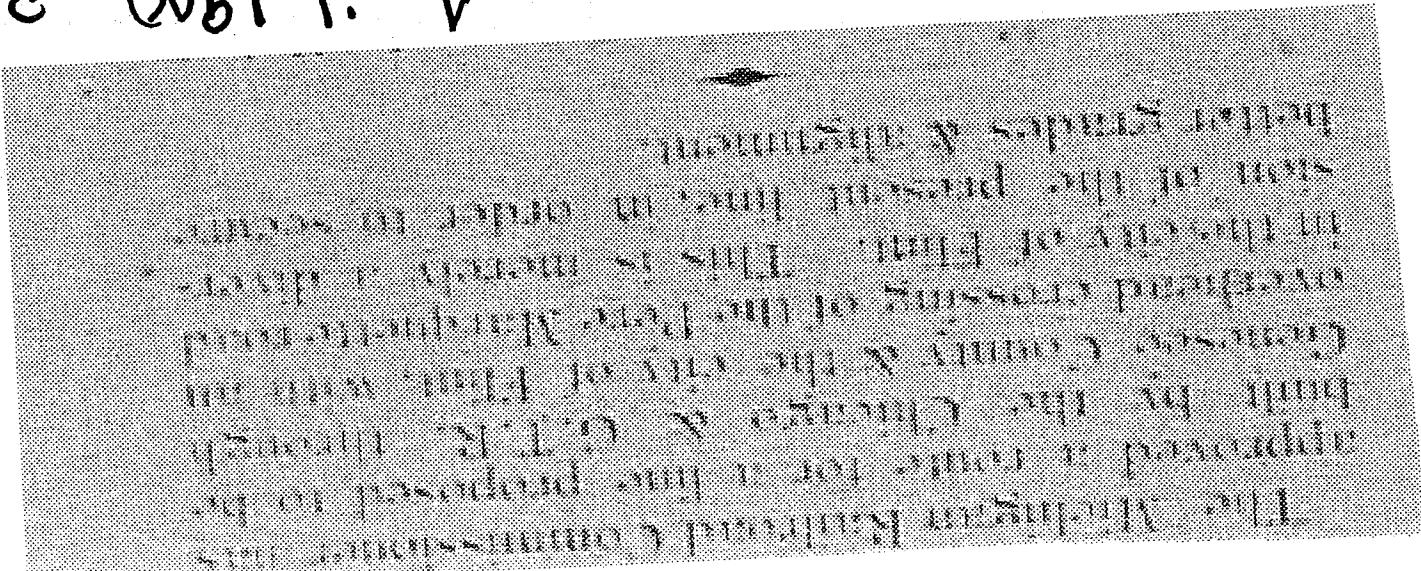
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April 1900 p109



dividing the interviews to discuss the issues
in detail. In addition, the bonds with the
original community will be maintained
throughout the project. All interactions with
the community will be based on the principles
of respect, equality, and integrity. This
means that the project will be conducted
with the community's best interests in mind,
and that the project will be transparent and
accountable to the community.

Finally, the project will be guided by a
team of experts in the field of community
development and social justice. The team
will include individuals with experience
in working with marginalized communities
and in addressing social issues. The team
will be responsible for ensuring that the
project is carried out in a safe and
respectful manner, and that the project
is successful in achieving its goals.
The team will also be responsible for
monitoring the progress of the project
and making sure that it stays on track.
The team will be composed of individuals
from different backgrounds and disciplines,
but all will share a commitment to
social justice and community development.

The project will be conducted in a
safe and respectful environment, and
will be open to the community at all times.
The project will be transparent and
accountable to the community, and will be
conducted in a way that respects the
rights and dignity of all individuals involved.
The project will be guided by a team of
experts in the field of community
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July 1990

Chicago & Grand Trunk Finances.

On returning to Montreal, June 25, from England, President C. M. H. Lee said:—I went to England in connection with a proposal to float the proposed bond issue of the C. & G.T. As set forth in a circular sent out last

year (& published in the Railway & Shipping Weekly for Nov. 26, 1881) the capital of the C. & G.T.R. Co., as constituted in 1882 & now existing, consisted of \$6,000,000 of 4% mortgage bonds bearing interest at 6 1/2 % \$6,000,000 of and mortgage bonds bearing interest at 5 1/2 % \$6,000,000 of common stock. No Irish convertible has been raised since

the 2d mortgage bonds were issued in 1882, but in order to provide capital & other requirements, a floating debt has accumulated of \$10,000,000, for which amount the Co. has issued to the C. P.R. Co. its bonds, secured by a 3d mortgage on the road. Moreover, as stated in the circular, additional capital was urgently required for the purpose of the building of the line for its proper equipment, & for the reduction of the gradients. The principal railway's cut off Chicago with which the C. & G.T. competes, have expended large

sums in the double tracking & improvement of their property, & it is deemed absolutely essential to enable this Co. to maintain its position in competition with other lines, that it should be placed in a condition to fully develop & economically work the traffic which it would then command. This further capital is estimated to amount to about \$4,000,000.

The proposal was to have a floating setting out of the road on the 1st mortgage bonds maturing Jan. 1, 1900, & the creation of \$15,000,000 of 30-year 4% bonds. This would re-

place the old higher-priced bonds held by the C. P.R. at 4%. The proposal had been accepted by all except the 2d mortgage bondholders & my mission to England was clearly no success. I must say the discussion was extremely friendly. The work of reducing gradient will be successful. The work of raising the road will be received less well by the road will come under practical control & management of the C. P.R. before Jan. 1, 1900.

The Financial Times, London, England, says:—Since the arrangement that a compromise had been entered between the C. P.R. & the holders of the C. & G.T. and subsequent bonds, considerably less difficulty exists as to how much the C. T.R. had planned on its original offer. We are now able to see clearly what the terms which have been agreed upon, & it will be seen that the officers of the communities have resented so great an increase, roughly estimated at some 15 to 20% on the

July 1900

p 199

On June 25 the Cr. T. R. started a passenger train service from Montreal westward, the International Limited, leaving Montreal at 9:45 a.m. The train, which is vestibuled throughout, includes combination baggage & smoker, first class car, cafe parlor car & Pullman sleeping car. Toronto is reached at 4:25 p.m., the 373 miles being covered in 7 hours 25 minutes. Only 10 minutes stop is made at Toronto, whence the train proceeds via Hamilton, London, Chatham & Windsor to Detroit, which is reached at 9:40 p.m. From Detroit it runs over the Detroit & Milwaukee Division to Durand, Mich., there joining the main line from Niagara Falls to Chicago. This lengthens the distance 32 miles over the St. Clair tunnel, but Chicago is reached at 7:30 a.m. The 373.32 miles being covered in 8 hours 30 minutes.

July 1902
P 21

[Aug., 1900.]

The New Era on the G.T.R.

One of the marks of the industrial progress of Canada in recent years has been a very general improvement in the roadbed, bridges, stations, rolling stock & general equipment of the G.T.R. It may be well before entering upon any of the details of this work to mention one result. The International Limited train, which formerly occupied 12 hours in the run from Montreal to Toronto, 333 miles, now travels from Montreal to Detroit, 557 miles, in the same time. Between Montreal & Toronto a large amount of double-tracking has been done. At Trenton there have been heavy grade reductions; the roadway embankment has been raised about 24 ft. at the highest point, & a double-track bridge is being constructed across the Trent River. Between Vandreuil & Ste. Anne's, also some heavy grades have been eliminated by the raising of the roadway embankment. Contractors are now at work double-tracking the section between Hamilton & Niagara Falls. The reorganization of the Chicago & G.T.R. embraces the double-tracking of the 335 miles from Port Huron to Chicago, including heavy grade reductions, & much of the work has already been done. Double-tracking & reduction of heavy grades of course contribute to speed as well as to safety, & it is natural to remark that in regard to the ballasting of many miles of track, & the substitution of 60 lbs. rails for lighter material, large expenditures have

August
1900

September 1990

DINING CARS TO CHICAGO

between Park Huron & Chincoteague is desorated
in Gold, maroon being the predominating
color, giving the car a most comfortable ap-
pearance.
Two bullet & parlor cars built in the C.R.
Mentioned shops have recently been placed on
the Interurban line and running between
but altogether erratic ones, than all the Pullman
cars used to be built in the Pullman works in
Illinoian. At the C.R. Montezuma workshops
35 Pullmans have been constructed, & it was
a favorite saving of the line C.R. Pullman
that neck to those built in its own workshops,
he liked those constructed by W. McWood, &
certainly it is that the experience gained by the
C.R. Master Car Builder in the manufacture
of Pullmans has been unused to splendid
advantage in the two handsome specimens of
cars now referred to. The
entirely different look now given to the
cars are striking in the first place by reason
of their size, measuring 71 ft. from sill to sill,
as if the vestibules were included in addition to
the vestibules as of the Pullman stan-
dard type with steel platforms. The cars are
built on 6-wheel trucks with steel tires. The
frame work of the exterior of the cars is white
wood, painted with the C.R. standard body
color, bullet green, resterly & exquisitely
finished. The finishing of the interior is of
Canadian quartered oak, finished with Eng-
lish oak lining. The head lining is embossed
with oak burl, the head lining the other colored a gold
to harmonize with the other colored a gold

Given the present standard of dimensions in the class the assigned lower numbers in the parallel series selected, there are sufficient spare numbers to provide for such cases as may be contemplated or required by the U.S. within 2 or 3 years. Then come cases of smaller length as capacity. The plan goes on to repeat the operation for each of the parallel numbers, with 33-millimeter increments, until the parallel numbers stand wide enough to permit two parallel tracks, a car equipped with two sets of wheels, with 33-mm. steel track wheels and 16-millimeter hubs, will cover all the difficulties, save the need of a heavy load which would be required to move the car over land. Two new dimensions have recently been put on between suspension bridge and highway, so that the new dimensions will fit the suspension bridge in the same space.

Passenger compartment	Front	Rear	Total	Passenger compartment	Front	Rear	Total
Passenger cars	1,100	3,000	4,100	Passenger vans	100	300	400
Furnishings	900,000	10,000	910,000	Kitchen fixtures	100,000	10,000	110,000
Promotional fixtures	900,000	10,000	910,000	Office fixtures	100,000	10,000	110,000
Display fixtures	900,000	10,000	910,000	Trade fixtures	70,000	10,000	80,000
Storage fixtures	50,000	10,000	60,000	Other fixtures	50,000	10,000	60,000
Display cases	50,000	10,000	60,000	Passenger cars	1,100	3,000	4,100
Passenger vans	100	300	400	Passenger vans	100	300	400

class, length & capacity. The subsequent

Grand Trunk—A. C. Elvin having resigned to accept service with another company, has been succeeded as Master Mechanic in charge of Montreal works by J. E. Murfield, heretofore Master Mechanic of the Western Division at the Western Mich. Fort Gratiot.

E. D. Jameson has been appointed Master Mechanic of the Western division, with headquarters at Battle Creek, having jurisdiction over all matters pertaining to this department excepting those at Fort Gratiot shops & Port Huron Tunnel pumping station.

J. McGrath has been appointed Master Mechanic in charge of Port Clinton & Port Huron & Sarnia pumping stations.

The following stations agents have been installed:

- Swanson, W. F. Briggs;
- London Fast, D. M. Kennedy;
- Bickford, F. H. F. Lord;
- 17th Street, J. Herkerry;
- Halsted Street, C. W. Brown;
- Dell, Slocum, A. O. Wood;
- Harvard, G. L. Knight.

January 1901

P15

\$6,384	\$6,384	\$46,466.81	\$50,344.59
cont.	exp.		

G.T.R. Double-Tracking.

The double-tracking of the G.T.R. between Hamilton and Niagara Falls, 33.51 miles, has been completed from Hamilton to Jordan, 26.46 miles, leaving 17.05 miles still to be done. The surveys for the work were finished in Oct., 1899, and the contract was let in Aug., 1900, to Rogers & Taylor, of Montreal. Generally speaking, the work has been of a comparatively light nature, although there was one pretty big cut just west of Grimsby station, and a long fill between Beamsville and Jordan, 5.80 miles, besides the building of the Jordan creek bridge. On the section yet to be completed there will be a good deal of rock cutting between Merritton and Niagara Falls, besides the grading and the building of a double track swing-bridge to get across the new Welland canal. Below are some details of the work already completed:—There has been no change in the alignment of the road except at the Jordan gorge, where the double track follows the original right of way instead of the reverse curve used as a single track. Regarding changes in gradients, the general instruc-tions were to keep within 15 ft. to the mile, and there has been no difficulty in doing this. The heaviest grade on the double track will

April 1901
P 109

The G.T.R. in Buffalo.

The following circular was recently issued by the G.T.R. General Passenger Department:

Concerning Article I. The passenger trains of the G.T.R., which will arrive at and depart from Buffalo Erie Street Station, via the Buffalo and Rochester line until the International Bridge, will depart from the New Exchange Street station, via the New York Central and Hudson River line, in Buffalo.

The Erie street station now used by the G.T.R. in Buffalo will be closed so far as passenger traffic is concerned. All routes both from the East and West, to run via Niagara Falls, arriving at and departing from the Elizab. Valley station on Washington Street, Buffalo.

MAY 1901

RAILWAY AND SHIPPING WORK

Local passengers will not be carried on G. T. trains between Black Rock and the Exchange Street Union station.
Tickets must not be sold or baggage checked for the trains in question from any station on the G. T. R. or connecting lines via Buffalo to any point beyond Buffalo. All through passengers far or from points beyond Buffalo must be ticketed and baggage checked via Niagara Falls, Ont., or Suspension Bridge, N. Y.

The present forms of local tickets to and from Buffalo which have been used foricketing passengers via International Bridge to and from Erie Street station, Buffalo, will be used to and from Exchange Street union station, Buffalo, and the same fares will be used to and from Exchange Street Union station, Buffalo, as are now in use to and from Erie Street station, Buffalo.

May 1901

Chillicothe Elevator. The Co.'s elevator at
51st Street and Central Avenue, was damaged
by fire, Sept. 21 to the extent of \$75,000.

September 1901

P278

Chicago and Western Indiana Road.

At a meeting of the directors and officials at Montreal, July 24, there were present: President Thomas and F. A. Rancourt; General Counsel, C. & W. I. Rd.; G. B. Korte, 2nd Vice-President, and F. W. Morse, 3rd Vice-President; G. T. M.; President McDowell, and G. W. Kretzinger, General Counsel, Chicago, Indianapolis and Louisville Rd.; President Underwood and O. W. Johnson, General Counsel, Erie Rd.; President Carpenter and O. S. Lykins, Rd.; President Samisay, and G. Bladgett, General Counsel, Wabash Rd. The object of the meeting was to confer as to what was to be done in order to comply with the decision of the Chicago City Council to compel the road to elevate its track between 16th and 27th streets in that city. The work will doubtless be undertaken at an early date, but the negotiations, which involve a multitude of

September

1901

SEPT., 1901.]

details, have not been finally closed, though it is expected an agreement will be arrived at within the next few weeks. It is said the cost of elevating the road is estimated at about \$6,000,000.

The C. & W.I.R.R. has 160 miles of line from Polk St., Chicago, to Elgin, Ill. It has 48.53 miles of branches, and its second, third and fourth tracks and sidings make the total track 218 miles. It owns over 850 acres of land in Chicago, used for right of way, switches and transfer yards, etc., and for stations leased to various companies. The belt division and the Indiana division are leased to the Belt Ry. Co. of Chicago, and the rest of the property is leased to joint by the Chicago and Eastern, the瓦萨什河 (Vassar River) and Grand Trunk (now the Grand Trunk and Western), the Chicago and Erie, the Chicago, Indianapolis and Louisville, French Auxiliary, \$1,000,000 of the capital stock), the Milwaukee and Santa Fe, and the Elgin, Joliet and Eastern Companies. The leases covering all expenses of operation and maintenance of the mileage basis. The leases are all covered by the mortgage as additional security.

September 1901

52

Detroit Double Crossing.—Reported by Western
Union Telegrams, Dec. 1, 1901.

The extended division to Chicago, 385 miles. (Dec., 1901, p. 52.)

Delivered Dec. 10. The double tracking is to be completed except the Duluth and Grand Trunk, which had not been surfaced from Grand Rapids to Studebaker, 12 to Thornton, 10 miles, and 10 miles to Kinnar, 10 miles west of Port Huron. For 10 miles to Thornton, practically all laid and placed, and is being used by east-bound freight trains. The track is between Port Huron and Durand, Mich., 82.5 miles, including 10 miles of new single-track between Port Huron and Durand, Mich., 82.5 miles. The double tracking has been completed at:

C. H. Westcott, Esq.—The double tracking is com-

pleted from Kinnar, 10 miles west of Port Huron, to 10 miles to Thornton, 10 miles, to 10 miles to Studebaker, 12 to Thornton, 10 miles, and 10 miles to Kinnar, 10 miles west of Port Huron. For 10 miles to Thornton, practically all laid and placed, and is being used by east-bound freight trains. The track is between Port Huron and Durand, Mich., 82.5 miles, including 10 miles of new single-track between Port Huron and Durand, Mich., 82.5 miles. The double tracking has been completed at:

John T. Hunt, Esq.—For the separation of the Grand Trunk, and Lake Shore and Michigan Central, the city of Detroit, and the Michigan Central, in next five years. The estimated expense of streets in that city during the separation of the Grand Trunk, and Lake Shore and Michigan Central, is \$1,000,000, and is to be borne exclusively by the railway companies. This amount is \$1,000,000 each year until 1906, and is to be carried over the whole division to Chi-

C. I. Western Ry. Double-trunking.—In
connection with the double-trunking of the
line from Port Huron to Chicago, the Com-
pany have struck a sinkhole near Flis-
sett's Park, Mich., 100,20 miles from Port
Huron. Fifteen thousand yards of gravel
had been dumped into the hole up to the end
of Aug., and it was expected that the team
shovel would be employed in filling the hole
until Nov.

Michigan Stations.—A new brick station
is being erected at Lansing. A new station
is also being built at Flint.

October 1902

P 341

WORLD.

[Oct., 1902.]

Line, about \$1,500,000. There is no confirmation of this statement, but on the other hand R. S. Logan, Assistant to the 2nd Vice-President, in an interview says that "there is not a word of truth in the report that the G.T.R. has purchased or secured any interest in any line to Toledo. We are getting tired contradicting the story."

Canadian Pacific Railway Land Sales.

Lot	Acres.	1901-02	1901-02	Amount.
Left.	1902-03	1902-03	1901-02	\$ 54,646.84
W.	111,155.354.93	39,089.96	5302.876.30	.16

October 1902

P346

The G.T.R. has completed the construction of eight 2nd class passenger cars, with a capacity for 68 passengers each, also two 60-ft. baggage cars, at its Montreal shops. Fifty flat cars of 60,000 lbs. capacity have been completed at the Co.'s Port Huron, Mich., shops. The Canadian Northern Ry. has placed an order in the U.S. for 400 box cars, to be

October 1902

~~the~~ Port Huron to Chicago Double Track.—
We were recently advised that 17½ miles of
the double track had been completed between
Port Huron and Chicago, and trains were
being operated over it. During 1902 the
second track was laid 79.43 miles. (Dec.,
1902, pg. 407.)

G. T. Pacific Ry.—According to the origin-

MARCH

1903
P 89

The Detroit and Toledo Shore Line Rd., (which is owned jointly, one half each, by the Grand Trunk Western Ry. Co. and the Toledo, St. Louis and Western Rd. Co.), owns, leases and controls a single track railway from a connection with the Detroit, Grand Haven and Milwaukee line of the G.T.R. at West Detroit, to Trenton, Mich., from which point to its connection with the Toledo Terminal Rd. at Toledo, it has a double track. Under a lease arrangement with the Toledo Terminal Rd. it reaches a connection with the Toledo, St. Louis and Western Rd. It has access, under running arrangements, to the Toledo, St. Louis and Western Rd. terminals at Toledo, and in like manner has access to the G.T.R. terminals at Detroit. The total mileage from West Detroit to Toledo is 67 70 miles. The road is laid with 70 lb. rails, well tied and well ballasted, with steel bridges and modern construction in every respect. It is now being operated for freight service only, but it is expected that passenger service will be put on early in 1904. The operation of the road is in charge of S. W. Knapp, Superintendent, with headquarters at Detroit, Mich.

October
1903
P 355

DEC., 1903.]

Railway Equipment Notes.

The G.T.R. has completed a new switching locomotive at Fort Gratiot, Mich.

The Intercolonial Ry. has completed a new passenger locomotive in Fredericton, N.B.

December
1903

Pt

Carling

A Detroit despatch states that it is proposed to undertake the work of laying a second track between Detroit and Durand, Mich., in order to have it completed by the time the Detroit tunnel is finished. G. M. W. S. The work in connection with the installation of the plant, and the other alterations necessary for the operation of the traffic through the Sarnia tunnel by electricity, is now in hand, and it is the intention to prosecute it to as early a completion as possible. There will be but one power-house, which will be located at Port Huron, Mich.

February
1904

P 59

WILL BUILD AT BATTLE CREEK

Grand Trunk to Erect Depot and Shops

BATTLING, Mich., June 3.—The Grand Trunk and the Great Western railroads, and the business men's association, are trying to build a new Grand Trunk depot in this city, and is likely to buy their locomotive shops from Huron. The deal has been carried forward in secret for some time past, but now the author-
ity of construction of the rumors has been taken off the shops was to be given to the officials of the road. The railroad company has purchas-
ed a large amount of land on the outskirts of the city for the location of the new shop. The removal of the
shops from Port Huron will be com-
pleted in five years in which
the change made and the
erected shops in full operation.
The officials of the company do not
anticipate the removal of the car shops
for some time at this time, though there
is no doubt that they will eventually
be located here as a matter of
economy.

June 4 1904

usual running time.

The Detroit and Toledo Shore Line, owned jointly by the C.T.R. and the Toledo, St. Louis and Western Rd., has entered into an agreement with the Toledo Terminal Belt Line by which an entrance into the Toledo terminals has been secured. The first C.T.R. train entered Toledo Sept. 10.

A resolution providing that advances may

December

1904

P 420

are intended for heavy grain traffic.

Eight cabooses built at Port Huron shops and completed for service in Nov., 1905, 34 ft. 1 in. over the platform, with an extreme width of 10 ft. 6½ in. and 15 ft. 6½ ins. from the rail at the highest point of the capoia. Fitted with Westinghouse air brakes and automatic couplers, also with cupboards, wardrobe, washstands, stove, etc.

During this period the G.T.R. also added

September 1966

7523

HILLWAY AND MARINE WHARF

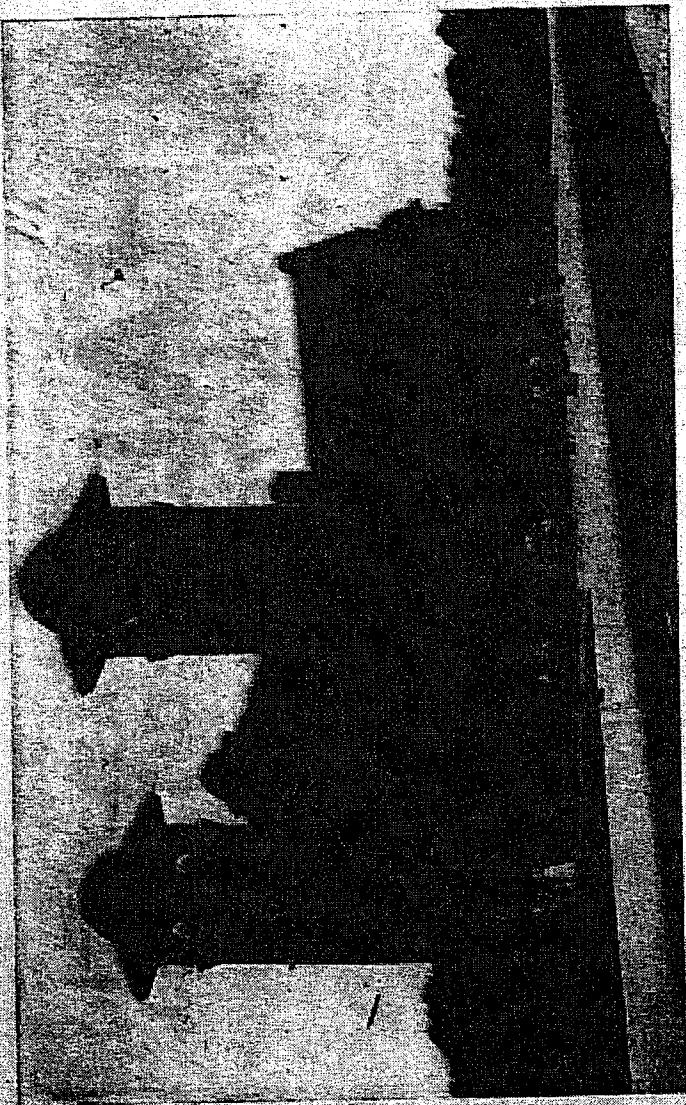
Battle Creek Station.—The new station erected by the C. T. & R. at Battle Creek, Mich., occupies the whole block fronting on First Hill St., between East Main and French Streets. It is built of Maine granite, with a roof of semi-glazed red Spanish tile. On the ground floor there are entrance lobby, general waiting room, smoking room, ladies' parlor, lunch room and baggage room, and on the second story are the offices. The waiting room is lofty, extending into the second story. The floor laid with mosaic tile, the walls whitewashed 9 ft. high with ivory enamelled tile, above which is a gilt frieze, and the ceiling is vaulted with granite arches. The platforms and walks are of concrete. About 200 ft. from the main building, but connected with it by a covered walk, is the building where the express mail car is handled.

November 1906

7651

Dec. 1906]

THE RAILWAY AND MARINE WORLD



GRAND TRUNK RAILWAY STATION, HATTIE CREEK, MICH.

December 1906

Detroit Freight Lines Ry.—The C.P.R. and the Michigan Central R.R. have taken over the new outlet line railway, built by Joe Berry and his associates.

Detroit Improvements.—A roundhouse and machine shop, to cost \$75,000, are under construction near Milwaukee Jet., Detroit, Mich. The buildings are of concrete. Plans for other improvements have been prepared and are under consideration.

December 1906

P 727

Bear Creek Sheds.—Extensive shops are being built at Battle Creek, Mich. The buildings comprise machine and erecting shop under one roof, the boiler and tank shop under one roof, the building being 175 by 817 ft. It will contain, 25 erecting pits, nine boiler stalls and nine tank stalls. The foundation work has been started. Other buildings will be erected, and it is expected that the whole of the buildings will be completed by the end of the year.

Track Elevation at Chicago.—The work of separating the grades of the G. T. Western Ry. 49th St. line, between Kedzie Ave. and Wallace St., Chicago, was begun on April 15, 1906, and is still in progress. The operation covered the elevating of three miles of double track main line, including the Aberdeen St. yard and also the Indiana Harbor Ry. double tracks which are parallel with the G. T. W. Ry. tracks. Twenty-four grade crossings have been eliminated and also the grade crossings with the Calumet Terminal and the Pennsylvania Ry., which may probably be restored when these roads are raised. The tracks were raised in an average of 15 ft. giving an overhead clearance of 12 ft. on 20 of the streets, the remaining four streets on which the Chicago City Ry. operates require an overhead clearance of 13.5 ft., which was maintained by lowering these streets 1.5 ft. It was found to be more economical to elevate the tracks the full height, rather than depress all the streets. The filling for the work, which necessitated moving 350,000 cubic yards of material, was procured at Oak Glen, on the G. T. W. Ry., and handled by the company's equipment to Chicago, a distance of 20 miles. The method adopted for doing the filling, was to first elevate the south G. T. track to grade, on a temporary pile trestle, building the trestle over the streets sufficiently strong to carry traffic, but between the streets the trestle was simply made heavy enough to carry the empty cars. The trestle was then filled in between the streets, and all the timber used was removed, except the piles; the filling was unloaded in the usual way, by means of plows and unloaders. While the work of elevating the first track was in progress, the regular traffic was operating over the Indiana Harbor Ry. tracks. After the first track was completed, the remaining tracks were built by widening out the embankment and building pile bridges over the streets. The work of grading was completed practically on Oct. 1, over 300,000 yards of material having been put in place by that date. Concrete abutments and retaining walls to the extent of 25,000 cubic yards will be required, of which 16,000 cubic yards is already constructed, and it was expected to have all concrete work completed Dec. 31. The steel bridges for the street crossings are being constructed, and are expected to be in place in the early part of 1907. As stated previously, the work was commenced April 15. Trains were using the high grade line Aug. 5, and grading for all the tracks was completed Oct. 1. The completed work for both the G. T. W. Ry. and the Indiana Harbor Ry. will cost, when completed, in the neighborhood of \$1,000,000, not including the proportion borne by the city of Chicago, which amount will include abutment damages.

Harbor Ry. Double tracks, which are parallel with the G. T. W. Ry. tracks. Twenty-four grade crossings have been eliminated, and also the grade crossings with the Calumet Terminal and the Pennsylvania Ry., which may probably be restored when these roads are raised on track elevation. The tracks were raised an average of 15 ft., giving an overhead clearance of 12 ft. on 20 of the streets, the remaining four streets on which the Chicago City Ry. operates require an overhead clearance of 13.5 ft., which was maintained by lowering these streets 1.5 ft. It was found to be more economical to elevate the tracks the full height, rather than depress all the streets. The filling for the work, which necessitated moving 350,000 cubic yards of material, was procured at Oak Glen, on the G. T. W. Ry., and handled by the company's equipment to Chicago, a distance of 20 miles. The method adopted for doing the filling, was to first elevate the south G. T. track to grade, on a temporary pile trestle, building the trestle over the streets sufficiently strong to carry traffic, but between the streets the trestle was simply made heavy enough to carry the empty cars. The trestle was then filled in between the streets, and all the timber used was removed, except the piles; the filling was unloaded in the usual way, by means of plows and unloaders. While the work of elevating the first track was in progress, the regular traffic was operating over the Indiana Harbor Ry. tracks. After the first track was completed, the remaining tracks were built by widening out the embankment and building pile bridges over the streets. The work of grading was completed practically on Oct. 1, over 300,000 yards of material having been put in place by that date. Concrete abutments and retaining walls to the extent of 25,000 cubic yards will be required, of which 16,000 cubic yards is already constructed, and it was expected to have all concrete work completed Dec. 31. The steel bridges for the street crossings are being constructed, and are expected to be in place in the early part of 1907. As stated previously, the work was commenced April 15. Trains were using the high grade line Aug. 5, and grading for all the tracks was completed Oct. 1. The completed work for both the G. T. W. Ry. and the Indiana Harbor Ry. will cost, when completed, in the neighborhood of \$1,000,000, not including the proportion borne by the city of Chicago, which amount will include abutment damages.

January 1907
P 25

K-
Inches a "is run
been completed.
Milwaukee Terminals. The G.T.R. has
acquired 24½ acres of land at Milwaukee,
Wis., on which it is proposed to lay out ad-
ditional terminal facilities
London, Eng., Offices.—A site is reported
in

June 1907

p407

THE RAILWAY AND MARKETING WORLD

shops for the Northern Division there. Information was promised us to the size of the shops and the number of men to be employed, to enable the council to reach a decision.

Port Huron Shops.—Plans are being prepared for the erection of some additional buildings at the locomotive shops at Port Huron, Mich. At the car shops good progress is being made with the new buildings. The second of the new structures, 40 by 60 ft., is expected will be started early in Jan.

Kalamazoo, Mich.—Land has been purchased at Kalamazoo, Mich., for terminals, and it is stated that a branch from the main line will be constructed in the spring to connect it up. Another report states that the Chicago and Kalmarazoo Terminal Ry. has been transferred to the C. & N. and will be used in connection with the projected branch from the main line to Kalamazoo. (Dec. 1897, pag. 807.)

JANUARY 1908

P33

April 1968

p249

Grand Rapids - Northern eastern part
of the company's area. Little has been written
on the company's history. The first
was proposed to be constructed with chartered
shares held by Grand Rapids and Lumber
Company. It will be operated by Grand
Rapids Company. W. H. G. Gannan
is president of the company. The
G.R. which originated, is located
in the neighborhood.

General Trunk-Wenatchee Gas Pipe Co.
The first line was laid out from Wenatchee
at the time of the great depression. The G.T.W.
was organized in 1912, was under the
name of Wenatchee Gas Pipe Company. The
line was built from Wenatchee to Ellensburg
and Yakima. The company was incorporated
in 1913. The line was completed in 1914.

CONNECTICUT WIRELESS INDUSTRIES

Stations Burned.—The G.T.R. has had three of its stations burned recently, the fires in Ontario being caused by lightning. The Lin station was destroyed June 22, with about \$15,000 damage. Walkerton station was destroyed the same night, and Loma, Mich., station was destroyed on June 29, the damage being about \$15,000.

August 1908
P.S.P.

conservatives locomotives. It is also proposed to raise the track between the north side of the London bridge, St. Mary's, Ont., and the freight yards south of the old G.T.R. town site, thus cutting out a heavy gradient.

Port Huron Shores.—The city council of Port Huron, Mich., has granted the company a portion of Riverview St. for shop purposes. Master Car Builder Hodgson of the Canadian Locomotive Co. told the council that he was instructed to have erected a wood mill, 117 by 78 ft., and to add new machinery in the other shops. The additional space given by the portion of the street taken in will be used for lumber storage. (Sept., pg. 631.)

October 1908

P 709

circle
south-
S.R.
I. O.
in-
closes
is-
house
for

train has passed through
Chicago and Kalamazoo Terminal Co.—
The property of this company has been
acquired by the C.R.R., which thus secures
an entrance into Kalamazoo, Mich. It is
said that a spur line will be constructed
from the main line nine miles south of the
city to establish a connection with the
terminals. (Mar. 1901)

Castro-Dallman Subsidies

May 1909

P 335

pleted May 1.

G.T. Western Ry.—A U.S. press report states that the company has under consideration a project for constructing a loop for the purpose of putting Kalamazoo on its main line between Port Huron, Mich., and Chicago, Ill. (April, Pg. 249.)

Press reports state that the C.P.R. will

May 1909
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Grand Trunk Railway Port Huron Shops
Destroyed by Fire.

A press report from Port Huron, Mich., on Nov. 26, states that block one of the G.T.R. car shops there was destroyed by fire that morning, the fire starting from an unknown source, and gaining rapid headway, due to lack of water, the pumps having been shut down to repair a water main. The buildings reported to have been burned include

the main building, 800 ft. long, which contained the General offices, stores department, machine shop, passenger car shop, draughting and record rooms, paint shop and upholstery shop. Most of these departments were at the general office end of the building, with the machine shop next, and the passenger car shop occupying the whole of the other end of the shop. In the different shops there are said to have been 14 passenger cars and 50 freight cars, which were totally destroyed, adding to the general loss. The 586 men on the payroll will be temporarily out of employment. New electrical equipment for the power house was to have been delivered. A joint dispatch credits G.T.R. officials there with 110, stating that the plant will be immediately rebuilt. Damage to the extent of about \$50,000, caused by the recent heavy storms on the Great Lakes, was done to the plant, which is located directly at the mouth of the St. Clair River, and repairs were nearly completed prior to the fire.

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... Northern Ex. Co. has open.

December

1913
PST

P 582

December 1913

Value, loss being estimated at \$10,000.

Nov. 3, the loss being estimated at \$10,000.
The Detroit and Huron Ry. extends from
Cass City to Bad Axe, Mich., 18.25 miles.
It was completed during this year, we are
officially advised, by the D. and H. Ry. Co.,
a subsidiary of the G.T.R. The construction
was light, the country through which the
line runs is a typical farming one, and is
especially adapted for the cultivation of
sugar beets and beans. The contractors
started work in Aug., 1912, a train service
was put in operation, Sept. 9, 1913, and con-
struction was finally completed Oct. 15,
(Oct., pg. 480.)

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" elevation and the erection of a new station at Bonaventure, is still under consideration in Detroit, Mich.—Press reports state that the G.T.R. is considering plans for the erection of a new station in Detroit, Mich., to replace the present Brush St. station. (June, pg. 253.)

August 1914

P 372

December 1914
P. 538

Port Huron, Mich., Shops.—The residents of Port Huron, Mich., Nov. 21, concluded a canvass in the city to raise \$100,000 as a bonus to the company to rebuild their car shops which were burned about a year ago. The company invited the city to give a bonus of \$100,000, promising to spend \$75,000 for land, and \$250,000 on the first section of the buildings. The company does not propose to build on the old site, but has chosen that now occupied by the Port Huron Engine and Threshing Co. (Nov. p. 508.)

Grand Trunk Railway Betterments, Construction, Etc.

London, Ont.—The city freight sheds, York St., London, Ont., were destroyed by fire, Dec. 6, the offices and the bonded warehouse alone escaping. The shed was about 200 ft. long.

Port Huron Shops.—The residents of Port Huron, Mich., have voluntarily raised \$100,000 for the purpose of buying the Huron Thresher Co.'s plant, in order that the site may be utilized for the new G.T.R. shops. Nothing has yet been announced as to when construction will be started.

January 1915
P 14

Grand Trunk Railway Betterments, Con- struction, Etc.

Grand Trunk Railway Betterments, Construction, Etc.

Alexander, Ont.—The G.T.R. station and restaurant at Alexandria, Ont., were destroyed by fire July 14, by sparks from a locomotive. The buildings were of frames and were erected over 30 years ago. This and were of a new station, which has been talked of for some time, will now be taken in hand immediately.

Brantford, Ont.—H. E. Whittenburger, General Superintendent, had an interview recently with representatives of the city council respecting sidings and other matters, including the betterment of the freight services at Paris.

Port Huron, Mich.—The G.T.R. freight sheds along the St. Clair River, Port Huron, Mich., were destroyed by fire, July 6. The total loss, including 22 freight cars, and freight in store and transit is placed at \$300,000. (July, pg. 237.)

August 1915

312

room
2 ft.

G.T. Western Ry. Double-Trucking.—In connection with the double-trucking of the connection with the double-tracking of the line from Port Huron to Chicago, the contractors have struck a "sinkhole" near Hasselt's Park, Mich., 166½ miles from Port Huron. Eighteen thousand yards of gravel had been dumped into the hole up to the end of Aug., and it was expected that the steam shovel would be employed in filling the hole until Nov.

Michigan Stations.—A new brick station is being erected at Lansing. A new station is also being built at Flint.

October 1902

P 341

portation to the members.

The G.T.R. and a Toledo Line.

Recent reports have appeared in the daily papers to the effect that the G.T.R. had acquired the Toledo, St. Louis and Western Rd., with a view of providing an entrance for the G.T.R. into St. Louis, Mo. G.T.R. officials denied these reports as they appeared, C. M. Hays, on his return from meeting the directors in England, stating that the Co. had no present intention of extending its lines in the U. S. A few days later a Detroit press report stated that it is understood that the G.T.R. has purchased the Detroit and Toledo Shore Line, an electric railway, from the Everett-Moor Syndicate, and on Sept. 4th Cleveland despatch said that the sale has been effected. The G.T.R. assuming all the outstanding indebtedness of the D. and T. S.

October 1902

P 376

JUNE, 1904.]

Pheasant Hill Branch.—A contract has been let to Foley Bros., Larsen & Co., for an extension of this branch from Jumping Deer Creek, to which point grading was completed in 1903, for a further distance of 40 miles. The contract includes grading, bridging and tracklaying. The work is being started at once. (April, pg. 113.)

Moose Jaw to Swift Current Gradient Reduction.—The work on reducing the gradient on the section between Moose Jaw and Swift Current, Assin., 112.3 miles, is being gone on with and is expected to be completed this fall. The present line has a maximum gradient of 1%, and it is intended to reduce this to a maximum of 0.4%. (April, pg. 113.)

Extension from Wetaskiwin.—A contract for the construction of a branch from Wetaskiwin, on the Calgary and Edmonton Ry., eastward for 25 miles, has been let to Foley Bros., Larsen & Co. The contract includes grading, bridging, and tracklaying, and it is expected the line will be completed this season. The work is under the control of J. G. Sullivan, Division Engineer of Construction. (April, pg. 114.)

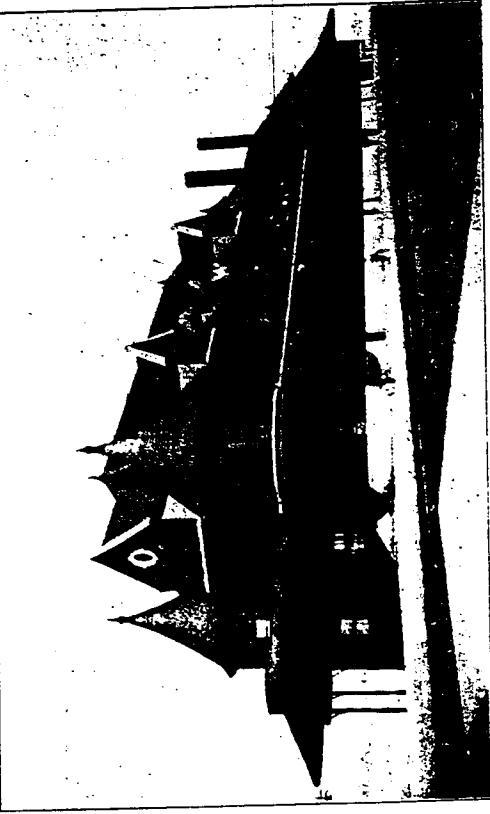
Water Treatment Plant.—The company is constructing plants at a number of points in Manitoba and the Northwest with a view of treating the water so as to enable it to be used with satisfactory results in the engines, as well as for other purposes. The water is treated with chemicals in tanks, and the deleterious matter sinks to the bottom and is subsequently removed in the form of sludge. Construction. (April, pg. 114.)

Extension at Banff.—An Order-in-Council has been passed authorizing the construction of a spur line from the main line near Banff, Alta., to the company's coal mines about two miles distant. This extension has been constructed by the Pacific Coal Co., a subsidiary company to the C.P.R., which is operating the coal mine—a semi-anthracite one. The line follows the course of Cascade Creek.

British Columbia Southern Ry.—The House of Commons has passed an act granting an extension of time for five years for the construction of the eastern section of the line. (April, pg. 113.)

Now Westminster to Vancouver.—The House of Commons at the current session of Parliament has given a third reading to an act extending the time for a further period of five years within which the branch line between New Westminster and Vancouver, B.C., is to be completed.

Minneapolis, St. Paul and Sault Ste. Marie Ry.—Contracts have been let for the further extension of the Glenwood branch from the present terminus at Ottertail, Minn., to the International boundary at Emerson, Man. The line will run through Detroit, Erskine, Third River Falls and Pelan. The work is light, the maximum gradient being 0.5%, and the greatest curvature 3°. Three steel bridges will be required on the route. Work is reported to have been started, and that it is expected to have the line completed by Aug. 1. Foley Bros., Larsen & Co., St. Paul, Minn., are the contractors. (Jan., pg. 25.)



G. T. R. NEW STATION AT DURAND, MICH.

G.T.R. Betterments, Construction, Etc.

St. Hyacinthe Double Track.—Some work, preparatory to doubling the track on the line between St. Hyacinthe, Que., and the St. Lawrence river, has been completed, and it is understood that further work with the same object in view will be gone on with at an early date. (Feb., pg. 59.)

St. Paul-Tirrot Improvements.—The plans for the yard extensions and other improvements between Cote St. Paul and Tancott, Que., have been prepared. They provide for large shunting yards, tracks for storing cars, roundhouses, etc. The cost of the improvements is estimated at about \$1,000,000. It is expected that work will be started at an early date. (Dec., 1903, pg. 421.)

Bridge at Kingston Mills.—A new bridge has been built over the Rideau at Kingston Mills, Ont., to replace a lighter one erected where the line was double-tracked about 1890. The Dominion Bridge Co. had the contract. (Kingston Subway, pg. 421.)

Kingston Subway.—The Frontenac, Ont., county council has passed a resolution authorizing the company to proceed with the construction of the subway on the Montreal road, at the Kingston city boundary. The cost, \$10,000, is to be divided between the city, the county and the G.T.R. The county fought the question when it came before the Railway Committee of the Privy Council in 1903.

Toronto.—Notice has been given by the G.T.R. to the Railway Commission that it will apply for power to expropriate a considerable portion of the area occupied by the buildings burned in the recent big fire in Toronto. With the exception of a small portion belonging to the Crown, and another piece belonging to a private owner, the whole of the property is owned by the city, and is let on leases to different persons. The leases, which expire in 1905, contain provisions for a renewal on certain terms. The company desires to acquire the land for the purpose of laying additional tracks and providing more yard space.

Parliament Buildings' Yard, Toronto.—The Commissioner of Public Works for Ontario, answering a question in the Legislature, recently stated that the grounds of the old Parliament Buildings were leased Mar. 23, 1903, for 21 years, from April 1, 1903; the lease was made to the G.T.R. Co. at a rental of \$6,000 a year for the first 10 years, and \$7,000 a year for the remaining 11 years. The rental is payable half-yearly in advance. An option is given to the company to purchase the building, exclusive of the other improvements at the station, was \$50,000.

The annual convention of the Master Car Builders' Association will be held at Saratoga, N.Y., June 22, 23 and 24, and that of the American Railway Master Mechanics' Association will be held on June 27, 28 and 29 at the same place.

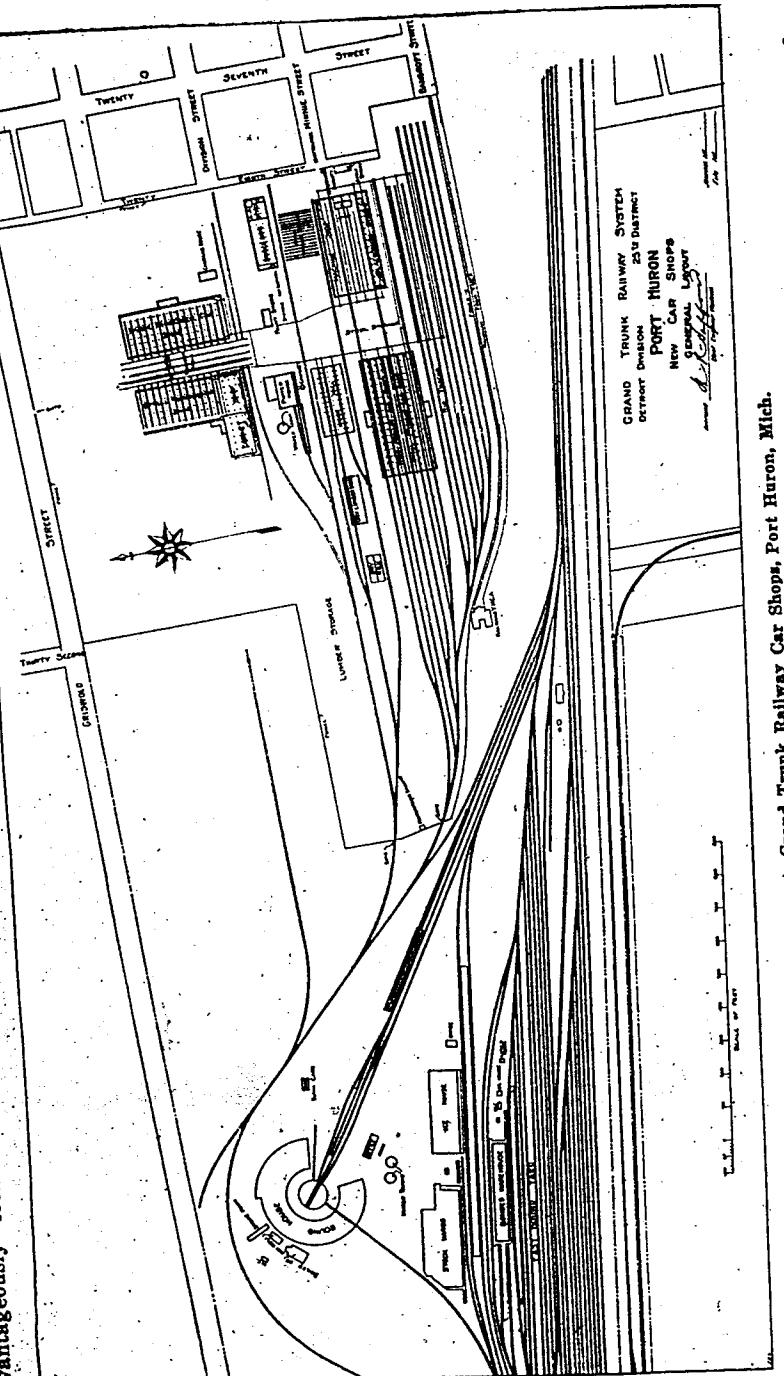
John R. Murphy
Mining World

Grand Trunk Railway Car Shops at Port Huron.

The G.T.R. has practically completed the construction of a new plant at Port Huron, Mich., for the repairing of freight and passenger cars. The principal car repair plant for the lines west of the St. Clair and Detroit Rivers has been at Port Huron for many years, but was destroyed by fire in the winter of 1914-15. It was of limited capacity and was located at the terminus of the old line previous to the construction of the tunnel. After the fire, negotiations were carried on between the town and the company, resulting in the selection of the present site which is advantageously located near the new

tunnel line and the locomotive house. The new plant will consist of:

Power plant—Engine room	35 $\frac{1}{2}$ x 70 ft.
Power plant—Boiler room	66 x 98 ft.
Large passenger car shop—15 cars capacity	134 $\frac{1}{2}$ x 30 $\frac{1}{2}$ ft.
Small passenger car shop—12 cars capacity	134 $\frac{1}{2}$ x 240 ft.
Steel freight car shop—28 cars capacity	78 x 360 ft.
Wood freight car shop—28 cars capacity	78 x 350 ft.
Cabinet shop—2 stories each	73 x 260 ft.
Blacksmith shop	74 x 268 ft.
Machine shop	74 x 210 ft.
Dry kiln	90 x 149 ft.
Dry lumber stores	85 x 183 ft.
General stores	69 x 63 ft.
General offices	59 x 50 ft.
Paint store	25 x 60 ft.
Dry kiln, 2 compartment	25 x 60 ft.
Battery charging house	25 x 60 ft.
Rapair track yard, with 200 car capacity	



General Layout, Grand Trunk Railway Car Shops, Port Huron, Mich.

tunnel line and the locomotive house. The steam power plant will consist of:

Power plant—Engine room	35 $\frac{1}{2}$ x 70 ft.
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Paint store	25 x 60 ft.
Dry kiln, 2 compartment	25 x 60 ft.
Battery charging house	25 x 60 ft.
Rapair track yard, with 200 car capacity	

The arrangement of buildings was given special attention with a view to distribution of power; the possibility of extending the plant and to ensure materials being handled by direct movement from the stores to the finished product. The offices are at the city end of the site, fronting to 28th St., and standing back about 60 ft., thus allowing of a good light and ventilating each individual bay. The freight car shops are planned for the cars to enter at one end, and the construction is similar to that of the passenger car shops, except that the buildings are divided by a party wall only, instead of the space occupied by the transfer table.

The cabinet shop is two stories, the general construction being similar to that of the car shops. The blacksmith and machine shops are planned in a similar manner to the freight car shops, with a fire wall dividing them. The woodmill, dry lumber store and less important buildings are of the usual type and contain no special features. The stores building is constructed on superheated steam.

The power plant will consist of three 200 b.h.p. and three 150 b.h.p. return tube boilers, the boiler pressure being 150 lb. per sq. in. The boilers will be fitted with superheaters, giving 150 degrees superheat when coal is used, and 200 degrees when wood refuse is used, and they will be adapted for hand firing, this arrangement being considered best, on account of the large amount of refuse burned. Other units will include two air compressors of 2,500 cu. ft. combined capacity of the cross compound type, specifically adapted for use with superheated

The superheat of these air compressors may be controlled by proportioning their supply of wet steam. Boiler feed, vacuum and fire pumps, and open type water heater will be installed. The boiler will be provided with brick stack 150 ft. high and 6 $\frac{1}{2}$ ft. in diameter, connected with steel breeching. The heating requirements for the shops will be considerable, due to the large amount of special work, in the nature of painting and varnishing, and will be supplied by cast iron radiators of the wall type, and pipe coils distributed as required. Coal will be directly delivered to bunkers inside the power house, by hopper cars discharging through a steel trestle.

The passenger car shops are so planned that each car under construction or repair will occupy one bay of either side of the power house, by hopper cars discharging through a steel trestle. The passenger car shops are so planned that each car under construction or repair will occupy one bay of either side of the power house, by hopper cars discharging through a steel trestle. The passenger car shops are so planned that each car under construction or repair will occupy one bay of either side of the power house, by hopper cars discharging through a steel trestle.

The two buildings are parallel to one another, with a space of 100 ft. between, which is occupied by a transverse table serving both. The roofs are designed with monitors, which run across the length of the building and so that even temperature may be maintained.

The general offices are attached to one end of the stores building, with a brick

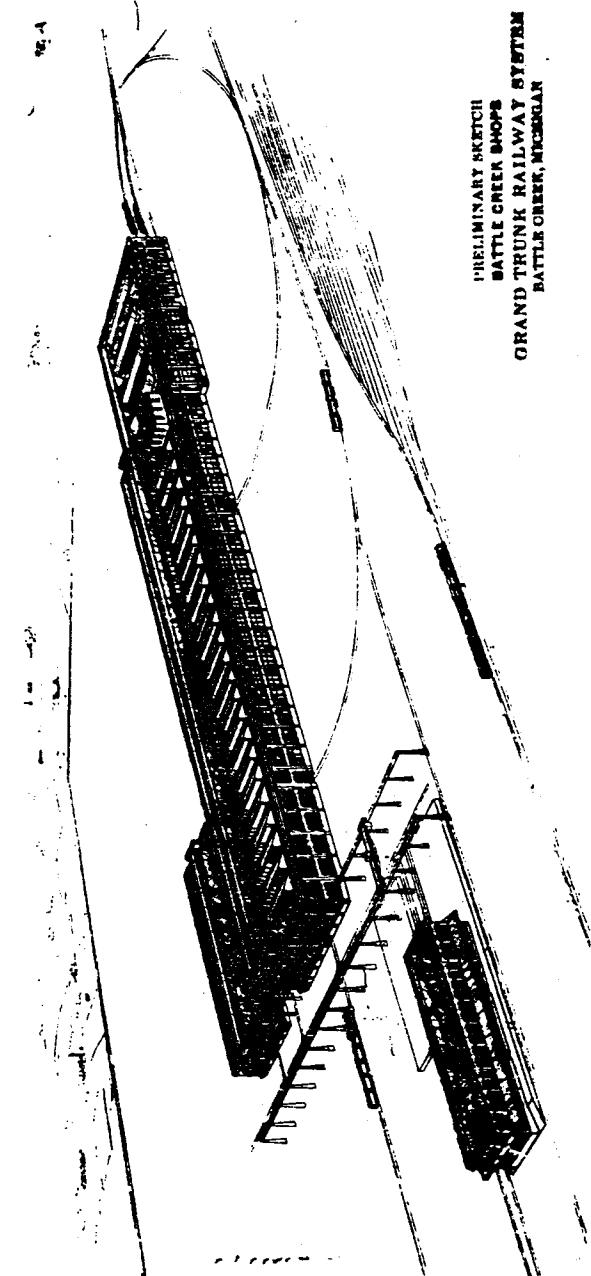
at about \$700,000.

Quebec and Lake St. John Ry.

This line, the control of which has been secured by MacKenzie, Mann & Co., was opened from Quebec to Gosford, 25.5 miles, in 1871, that section being laid with wooden rails. In 1880 it was reconstructed and extended to St. Raymond, 36 miles from Quebec. From 1884 to 1888 a further extension was built to Roberval, and in 1888 the eastern extension was completed to Chicoutimi. A branch is under construction from Jeanne-Sauve to Tuque, about 40 miles, on which 16.75 miles of rails were laid in 1906. A branch of a mile to Roberval wharf and the Gosford branch of 1.50 miles were also built in 1906. The bonded debt on Dec. 31, 1905, was as follows: £530,000 prior lien 4% 20 year £100 coupon bonds due April 21, 1921; £442,000 1st mortgage 5% £50 and £100 bonds due Dec. 31, 1924, ranking after prior lien bonds; £640,000 6% £50 and £100 income bonds due Dec. 31, 1924, interest payable if earned. The interest on the 1st mortgage bonds, payable Jan. 1 and July 1, was at the rate of 4% a year till July, 1905. The statistics of operation for the year

O.T.R. Shops at Battle Creek, Mich.

The G.T.R. is building at Battle Creek general locomotive shops for the lines west of the St. Clair and Detroit rivers, which include about 1,000 miles of line and 310 locomotives, and as the present small shops are unable to handle the large power, improved facilities are imperative. The new shops are about two miles from the business district of the city, and half a mile from the present street railway terminus. They are placed on a tract of 188 acres, adjacent to the present freight yard and main line tracks. The plans given herewith show only the locomotive department, but the requirements and relation of a future car department have been carefully considered, and the complete general shop layout is characterized by the following features: A mid-way crane of 70 ft. span, at right angles to the base line tracks, travelling through the centre of the group of buildings of both departments, will handle all the cross-yard traffic and be supplemented by a network of industrial tracks and turn-tables of standard gauge. A system of through tracks parallel to the main line will serve all departments and be connected to the main line at both ends of the shop yard. Provision has been made for 100% increase in all departments without in any way interfering with future yard traffic and without materially increasing the future travel between departments. The buildings are separated from each other by a minimum distance of 50 ft. for fire protection. There is ample yard space tributary to each building, yet the layout is not spread over an unreasonable area. An economical use has been made of the property, and a liberal provision left for the Maintenance of Way, and Bridge and Building Departments at the eastern end of the yard. The power house is centrally located, all large power consuming buildings being within 1,000 ft. It will be adjacent to the future planing mill, which, in addition to being a large power consumer, will produce a vast amount of shavings and refuse, which can easily be disposed of as fuel at a profit in the power house. A feature of the transportation facilities is the provision made for a system of mono-rail electric cranes, which will supplement the ordinary travelling crane service. In this system any or all of the regular cranes become transfer cranes connecting with I-beam runways extending throughout the shops and yards. These runways will be installed as the plant develops, and as rapidly as the needs require.



PRELIMINARY SKETCH
BATTLE CREEK SHOPS
GRAND TRUNK RAILWAY SYSTEM
BATTLE CREEK, MICHIGAN

ended June 30, 1906, show: Passenger earnings, \$174,420.15; freight earnings, \$340,711.41; mail and express, \$19,097.78; other sources, \$29,628.65; total, \$29,833.857.99. Expenditure—Maintenance of way and buildings, \$84,454.21; motive power, \$153,167.37; cars, \$17,801.91; general and operating expenses, \$132,038.95; total, \$388,002.44; net earnings, \$175,795.55. Train mileage—passenger trains, 201,820 miles; freight trains, 129,495 miles; mixed trains, 36,824 miles; total, 367,939 miles; engine mileage, 582,363 miles. Passengers carried, 301,729; freight handled, 345,001 tons.

The company owns 23 locomotives, 5 sleeping cars, 1 official car, 9 first-class cars, 9 second-class and immigrant cars, 4 combination passenger and baggage cars, 3 baggage, mail and express cars, 361 cattle and box freight cars, 2 refrigerator cars, 237 flat-top cars, 99 coal cars, 8 conductors' vans, 2 too, 4 snow plows, 1 flanger, 2 steam shovels, 15 dump cars.

Farmings for Jan. \$35,844, against \$29,330 for Jan., 1906.

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Farmings for Jan. \$35,844, against \$29,330 for Jan., 1906.

The Locomotive Shop includes both the locomotive machine and erecting shop, as well as the boiler and tank shop, and the machine department of the latter. In order to prevent the length of the building from becoming excessive when the future extension is added, a departure from the usual proceeding has been made in placing the boiler and tank shop at right angles to the main part of the building. The building is a self-supporting steel frame structure, with brick walls and a concrete roof. The overall length is about 833 ft., and the maximum width about 185 ft. The boiler and tank shop is separated from the machine and erecting shop by a brick curtain wall, which will in a great measure prevent noises from the former shop reaching the main building. An opening is provided in this wall large enough to pass a boiler. The erecting bay is 70 ft. wide and contains 25 pits on 24 ft. centers. Locomotives will enter and leave the building from the west side and until future extension is made, the use of turn-tables has been avoided. Each pit will be provided with compressed air, water, steam and electrical connections, while the entire shop will

be served with a 120 ton crane and an auxiliary crane immediately beneath, of 10 tons capacity. Paralleling this shop is the locomotive department of the machine shop, in two aisles, one with crane service for the large machines and one without crane service containing small belt-driven tools. Above the latter is a gallery for heating fans, lavatories, locker-rooms, the tin shop and the air-brake department. Alternate columns in these two aisles will be provided with compressed air and water service connections, while on every few columns the water service connections will be extended to the roof.

The Boiler Shop is in the first aisle of the part of the building at right angles to the main shop. Stalls are located on 20 ft. centers, with 80 ft. of clear width between columns. Opening from this shop is the riveting tower, situated so as not to interfere with any other department, and, at the same time, conveniently located for direct service from the boiler shop crane. A 30 ton crane serves the boiler shop and a 20 ton crane the riveting tower. The boiler and tank machine shop extends throughout the next aisle and is served with a 10 ton crane, while beyond the tank shop, of sufficient width to allow room for a tank and its frame on a single stall.

A balcony for heating apparatus, lockers and toilet rooms will extend over a portion of this shop; a 20 ton and a 5 ton crane supplying

all the transportation facilities necessary. The entire building will be heated by indirect radiation, steam or hot water being used in the heaters. Fans and heaters will be located on the balconies, the hot air being distributed through a system of underground ducts with openings in the walls and locomotive pits, and through an auxiliary distributing system of galvanized iron ducts extending along the west wall of the building under the balcony. All tools throughout the building will be driven by individual motors when of sufficient size, while smaller tools will be grouped and driven by a single motor or connected with line shafting under the balcony. All wiring will be concealed, a main wiring tunnel extending throughout the building with cross ducts in each bay. Particularly good natural lighting is obtained from the large windows and from the skylights, and saw-toothed roofs.

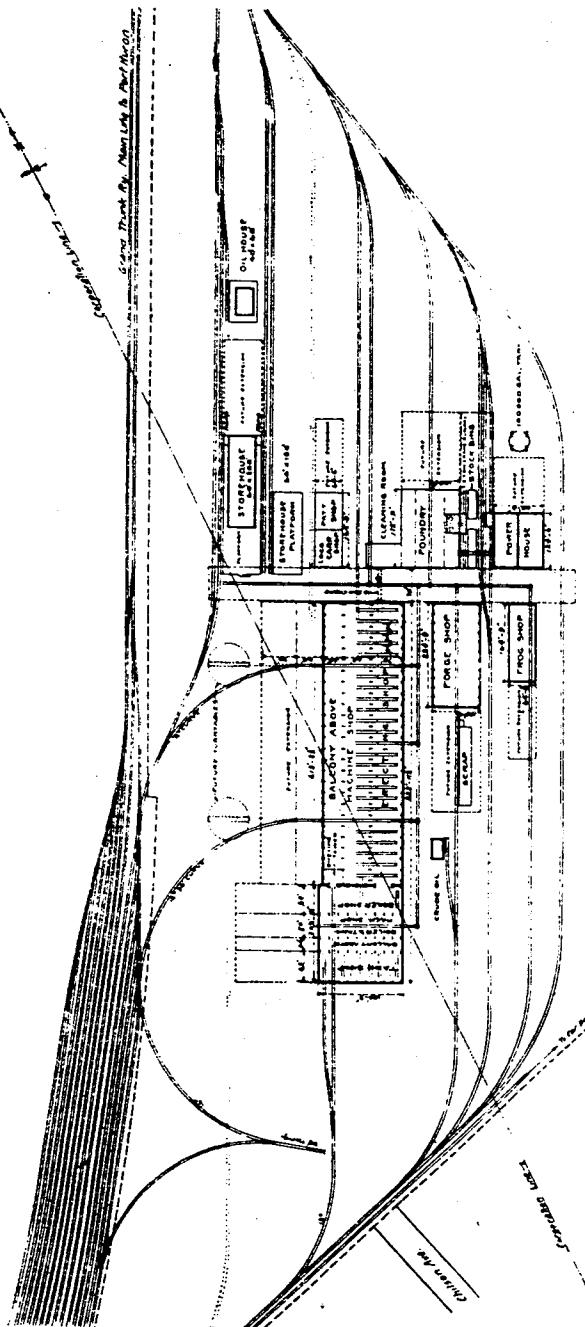
THE BLACKSMITH SHOP is a self-supporting steel frame structure with brick walls, 105 by 225 ft. A jib crane will serve the large fires, furnaces, and the heavy tools. A total of about 40 fires will be installed, with

slag can be transferred to the ash car near the power house. A system of narrow gauge tracks and turn-tables in and about the foundry will supplement the cranes. The brass foundry, 30 by 72 ft., will be located in one side of the foundry building. It will be equipped with one or more furnaces of the converter type and with other modern appliances. The cleaning room of the foundry is contained in a wing 18 by 81 ft., and this portion of the building will be served by a 5-ton crane, which will run into the main part, thus facilitating the transportation of castings to the cleaning room. The building will be a self-supporting steel structure with brick walls, a cement roof, and exceptionally good lighting. The floor will consist of a fill of molding sand on the natural soil. The equipment will be designed for an output of 20 tons a day.

THE FROG SHOP will also be of brick and steel design, of construction similar to that of the other buildings. It will be 65 by 165 ft. and will be supplied with crane service. All the frogs, switches and crossings required on the Western Division will be built here.

The entire building will be surrounded by a concrete platform with inclines to grade. A fire wall will separate the foundry from the oil service room. Oil will be handled by the most approved methods. Every precaution will be taken to have this building fireproof and its isolated position with regard to the remaining buildings gives additional protection from fire hazards.

THE POWER PLANT is designed with a view of supplying all the power necessary for operating the plant and for heating during winter, and to supply sufficient steam for all steam-driven tools, also for operating an auxiliary generating plant of 200 k.w. capacity, which will be used in emergency in the event of it being decided to purchase power, which question is now under consideration. Should the power be purchased, the necessary transforming apparatus will be installed in the power house, current being received at 5,000 volts and distributed for shop use at 440 and 110 volts alternating current and 220 volts direct current. Alternating current motors operated on the 440 volt circuit will be installed



GRAND TRUNK RAILWAY SHOPS, BATTLE CREEK, MICH.

THE PATTERN AND LOCOMOTIVE CARPENTER SHOP will be similar to the others in design and of such construction that the pattern storage rooms will be absolutely fireproof. It will be approximately 65 by 165 ft. **THE STOREHOUSE.** — In contrast with the average locomotive repair shop, storehouse of semi-fireproof construction, in this case the storehouse will be absolutely fireproof throughout, of concrete construction, with brick walls, occupying 60 by 200 ft. All stores will be kept on the ground floor and the upper story reserved for the storekeeper and master mechanic's offices. The building will be literally supplied with platform space and track facilities on each side, which will permit easy access for loading and unloading supplies while not impeding traffic between the shops and the store. The platform in front of the building extends under the yard crane, allowing materials to be easily transported.

THE IRON FOUNDRY has been located convenient both to the storehouse and the locomotive shop, the principal consumers of its output. A 20 ton crane reduces the manual handling of ores, ladles, castings and flasks to a minimum, while an outside crane of 5 tons capacity, running between it and the power house, will serve the charging floor. This crane will be of more utility than an elevator, as coke can be unloaded directly from cars either into bunkers or on to the charging platform; pig iron can be easily delivered to the platform and truck loads of

wherever possible, being used to drive line shafting and individual crane and machine tool motors that do not require excessive variations in speeds. Variable speed motors and a few crane motors will be run on the 220 volt direct current system, and all lights on the 110 volt line. Also if power is obtained from outside sources, the capacity of the boiler plant will be governed by the amount of heat required in the various buildings in winter, and in order to heat the buildings during the coldest weather it will be necessary to install approximately 1,800 boiler horse-power. Steam will be taken from these boilers and used in connection with the blower system and distributing ducts in all the larger buildings, and then in the smaller buildings the heating will be obtained through direct radiation.

PIPING SYSTEMS. — Piping from the power house to the shops will, as far as possible, be carried on the supports of the midway crane. This obviates the necessity for a tunnel, in this case, hard to drain. Air compressors will be located in each building, furnishing the necessary air for that building, different buildings being connected through a small pipe line, which will prevent absolute

shut down in case the compressors in any particular building fail. Water for shop and boiler purposes will be taken from Battle Creek River, a pumping station with electrically driven pumps being located at the bank of the creek. This pump will force water into a 150,000 gallon tank located in the vicinity of the power house, the latter giving sufficient pressure to supply the various buildings. This tank will be divided into two portions, one of 50,000 and the other of 100,000 gallons capacity, the latter being kept in reserve in case of fire. The river pumps will be supplemented by fire pumps in the power house, which can be used on the line in case of necessity. As a supplementary water supply, connection will be made with Battle Creek city water service, it being the intention to use this supply for drinking water and for all purposes only in case the supply from Battle Creek River should fail for any reason. The water service lines will loop all the buildings, and from 10 to 50 hydrants will be placed in different parts of the yard, so that there will be no distance greater than 300 ft. between any two hydrants. Inside the buildings, hose connections will be placed every 300 ft., with a swinging hose reel and 75 ft. of hose. It is the intention at the present to discharge all sewage into Battle Creek River, with the understanding that should this sewage become objectionable at any time, it will either be treated or the system changed to discharge all the sanitary sewage into the city's sewer system.

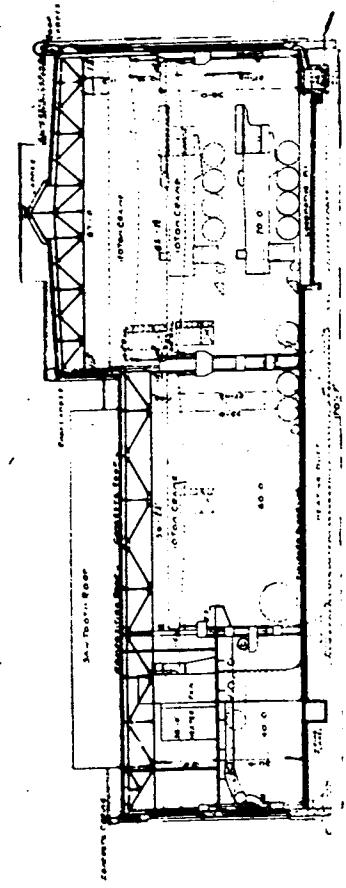
E. H. Fitchburg, Third Vice-President G.T.R., is in active charge of the arrangements for the entire installation, and W. D. Robb, Superintendent of Motive Power, is planning the operating features of the shops. The shops will be operated under the supervision of J. P. McGrath, Master Mechanic, now in charge of Fort Gratiot shops, who is assisting Mr. Robb in selecting and arranging the tool equipment.

Railway Finance, Meetings, etc.

Alberta Ry. and Irrigation Co.— Railway earnings from July 1 to Feb. 28, \$120,419; net earnings from all sources, exclusive of dividend sales for same period, \$37,907.

Canada Atlantic Ry.— An action has been instituted in the Ontario courts by H. L. Sprague, of New York, against J. R. Booth, Ottawa, to recover \$2,000,000 damages for alleged breach of contract on the sole of the Canada Atlantic Ry., and for the return of \$259,000, a deposit on the contract. The action is entered by Sprague as assignee of W. Seward Webb and A. L. Meyer. In 1902-03 an ambitious scheme of railway

amalgamation in Canada, with the Rutland Rd., of which W. S. Webb was President, as the U.S. connection, was one of the features of railway financing. An option was obtained on the Canada Atlantic Ry., but the project never materialized, and there year 1906 amounted to \$40,165.



CROSS SECTION MACHINE AND ERECTING SHOP, G.T.R. SHOPS, BATTLE CREEK, MICH.

has been a good deal of litigation as a result of the different operations of the parties to the contract.

Bromington Atlantic Ry. Earnings for Jan. \$68,810, against \$63,400 for Jan., 1906. Earnings for Feb., \$59,200, against \$54,067 for Feb., 1906. Total for two months ended Feb. 28, \$128,000, against \$117,400 for same period 1906.

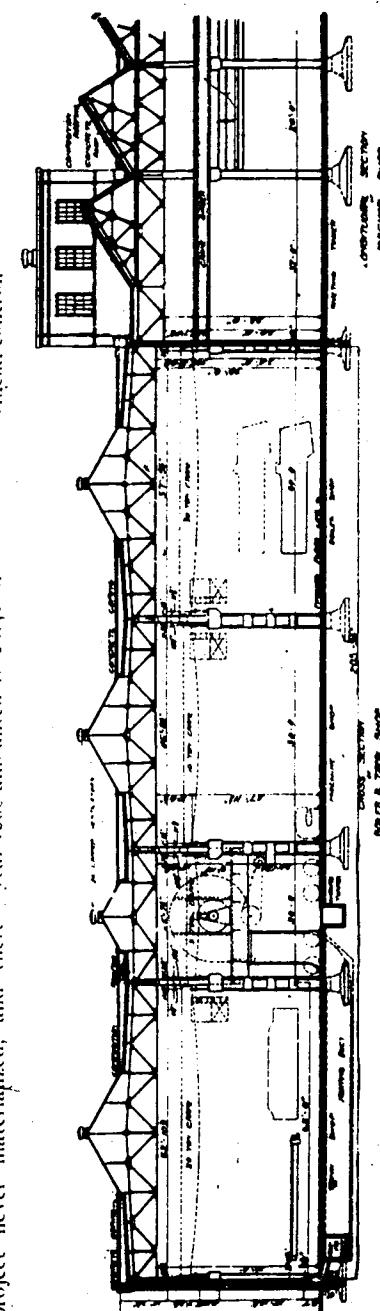
Grand and Trunk Pacific Ry. A recent London, Eng., cable states that only 70 per cent. of the last issue of 4% debenture stock was taken up.

Inverness Ry. and Coal Co. The report for the year ended 1906 shows a decrease of 10,562 tons of coal shipped, but the net loss in money is not given. The railway for the year shows net earnings of \$42,079.10.

New Brunswick Ry. and Coal Co. The report of the Commissioners for the year 1906, as presented to the New Brunswick Legislature Mar. 3 showed total earnings, \$13,196, against \$37,031 in 1905, and \$25,387 in 1904. The net earnings were \$2,345, a deficit of about \$6,000 in 1905, and \$14,000 in 1904. The statistics showed: Freight carried, 38,731 tons, 31,336 tons being coal, against 25,917 tons, 18,318 tons being coal, in 1905; passengers carried, 13,940, against 10,846 in 1905. Additional rolling stock is required, the 46 cars which the line possesses being unable to carry the freight offering. The company had been offered contracts to supply 73,000 tons of coal during the current year.

Perr Marquette Rd. The suits instituted by W. A. Bradford respecting the Chicago, Cincinnati and Louisville Rd., have been compromised, and the way partially cleared for the ending of the receivership of the Cincinnati, Payton and Ohio Rd., and the P. M. Rd.

Quebec Central Ry. The London Stock Exchange has granted an official quotation for a further issue of 1,000 shares of £25 Act, to reduce, alter, vary, or change the tariffs of rates submitted to it for approval by the railway companies subject to provincial control.



GRAND TRUNK RAILWAY SHOPS, BATTLE CREEK, MICH.

Misuse of the 24-Hour System.

H. W. D. Armstrong, M. Can. Soc. C.E., wrote from Saskatoon, Sask., Feb. 15, "Allow me to draw attention to what appears to me a misuse of the 24-hour system of time, as given in many railway time bills. It is not unusual to find something like the following: 'This time bill will take effect at 24.01 on Saturday, February 16.' When does that minute arrive? This being written at 15 o'clock on Friday, the 15th nine hours from now will be 24 o'clock on Friday, the 15th, and the day and date is ended."

"Now the notice of change in time bill given above is probably intended to take effect at one minute after midnight to-night. Certainly the one minute belongs to date 16th, but not the hour 24; because 24 o'clock on Saturday, the 16, does not arrive until to-morrow night, and we have the hour belonging to one date and minute belonging to another used together."

"It seems to me that when 24 o'clock arrives, the date and day terminate. Any time desired to be noted up to 1 o'clock following should be expressed as 0.01, 0.05, etc., and the notice first mentioned should read: 'This time bill will take effect at 0.01 on Saturday, Feb. 16.'

"I have spoken to different railway managers and superintendents on the subject, but so far have failed to find any to admit the error which I have endeavored to explain.

The Nova Scotia Government is taking power at the current session of the Legislature by an amendment of the Railway Act, to reduce, alter, vary, or change the tariffs of rates submitted to it for approval by the railway companies subject to provincial control.

GRAND

TRUNK

WESTERN

DIARY

SARNIA OBSERVER

GRAND

TRUNK

WESTERN

DIARY

CANADIAN NEWSPAPERS

Grand Trunk Excursion to Detroit.—We find an article in a late No. of the Detroit Tribune, on the extension of the Grand Trunk Railway from Port Huron to Detroit, and the progress of the work, and buildings on the line, from which we condense the following information:—Forty miles of the track eastward from Detroit are laid,—twenty of this fully ballasted; and track-laying is proceeding at the rate of three-quarters of a mile a day. The iron is all on the spot, and it is confidently anticipated, that by 1st November the connection with Port Huron will be complete. By that time it is also expected the connection between this place and St. Mary's will be completed,—so that there will then be direct communication from Detroit to Portland,—with the exception of the break in the chain at Montreal, by the Victoria Bridge, which is not expected to be completed till some what later.

The Tribune describes at some length the ferry-boat which was lately built at Windsor, for conveying cars across the river at the Point. This description we need not repeat; we may state, however, that she is now on the way up, and will be in her place before she is required. The Officer, which has been chartered by the Company as a Passenger Perry-boat,—to be used for that purpose till the one now being built here is completed,—has already arrived. She had been fitted up expressly for the purpose, and her presence here is of course an indication that the Company expect soon to have work for her.

Some difficulty has arisen as to the gauge of the line between Port Huron and Detroit. The gauge on all the Michigan roads, is four feet eight inches; that of the Grand Trunk and Great Western, five feet six inches. The plan at present adopted is, to lay the track on the narrow gauge, but in such a way as that one rail can be moved, so as to form the wide gauge of the Canada roads, should the Directors afterwards see fit to do so.

Extensive preparations are being made in Detroit for the transaction of the business which the road is expected to do, in the way of purchasing right of way into the city, and the erection of suitable buildings. There is to be a brick turn-table. Then there are to be two Train-shedding Sheds or Warehouses, each 500 feet long and 15 feet wide. These will have roofs projecting on each side 10 feet, so that a train of cars can run directly under them and goods be protected from any storm while being unloaded, into the warehouse. A Passenger Depot 108 feet long and 30 feet wide, of brick, and finished off complete, is also to be put up for the accommodation of passengers. Four Baggage-Sheds, 60 feet long by 40 wide, and 800 feet of platform, comprise the list of contemplated improvements at this point, but it is no small list. The roofs of all the buildings are to be of slate. The work is already begun, and in two months more, these buildings will stand complete! Such is the energy with which the work is prosecuted. This will involve the outlay of a large amount of money, to be paid to our mechanics and builders this Fall.

The location of a passenger depot in the midst of the city is still a matter of uncertainty. Whether the right of way will be purchased and a track laid down by the side of that of the Central, to be terminated in its depot, or whether some separate location will be chosen and a separate depot be built, will probably remain undecided for some time yet! But the improvements we have enumerated are already fixed, and will be in existence in a surprisingly short space of time.

September

30

1859

Sarnia
Observer

Railway Accidents

A recent American despatch is to the effect that the Vanderbilt interests have purchased the Northern and Northwestern line between Flint and Saginaw in Michigan, and put on it cars and laundry in Michigan Central. The origins of the Michigan Central, the railroad that Vanderbilt now has in his power lie in the fact that the Northern railway company connecting line in the trains had taken the Grand Trunk through route to Chicago, and that that company is now weaker financially than out from Chicago except by water and river lake with which whatever Vanderbilt may be pleased to draw in his management of the road. To secure the new managers of their willing Northern road have signified their willingness to resume relations with the Calumet and Lake Huron (or the G. T. W.) only upon the stipulation that such relations may be terminated within 30 days notice. This, of course, will prevent the Grand Trunk from making any rate except such as are dictated by its characteristics, for no bodies ever run the threat of keeping them out of their road altogether, keeping them out of their road altogether, come about by some accident which would

The result which has come about Mr. Hickson's forced leave, and Mr. Hickson, the energetic general manager of the Grand Trunk, has worked immediately to obtain control of the Northern line. Indeed it is understood that the recent intention to amalgamate with the express company and the telegraph and telephone arrangements of the Canadian Pacific, has been fully consummated. In this, we are sorry to hear, he has been successful, and the rumor has gained currency that he intends renouncing his position, finding that continued material competition, following the opening of the Great Lakes Canal, would be the bane of his existence. The withdrawal of Mr. Hickson would be a serious loss to the Canadian Pacific, as the general manager, being experienced, and very able, and practical, has done much to

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The G. F. C. has been organized to help the Grand Lodge in its efforts to increase its membership. As a result of the work done by the G. F. C., the Grand Lodge has increased its membership by 10,000 in the last year. The G. F. C. has also helped to increase the membership of the various lodges throughout the state.

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July 2
1878
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The G. T. R. and its Detroit Connections.

The Detroit Evening News thinks the Grand Trunk can still easily acquire a connection to replace the Michigan Central. It says: "As a Detroit zenith man well posted on railroads remarks, 'People who are worth one hundred millions of dollars do not lay down.' The capitalists who run the Grand Trunk have pecuniary resources vastly superior to Vanderbilts, and both their pride and their interest will lead them to open a route over this peninsula to Chicago. In the consideration of this question it does not appear that the Grand Trunk can be shut out for any great length of time, providing it goes vigorously to work to drive its compulsory disaster. There are several feasible routes which can be adopted. First there are the two ends of the Chicago & Lake Huron railroad. One end extends from Port Huron to Flint, the other from Lansing to Indianapolis, Ind., where it connects with the Pittsburgh & Fort Wayne road for Chicago between Flint and Lansing is the connecting link—the Chicago & Northeastern railroad—which was grubbed by Vanderbilts. This is only 10 miles long. The Grand Trunk may be able to acquire both ends—they are both in the wind—and then build a road parallel with the Chicago & Northeastern and parallel to near Hilldale; build a 40 mile road from that point to Butler; then use the Fall River to Alburg, and from there run into Chicago on the Baltimore & Ohio road. Still another route would be afforded by using the Hilldale road to its western terminus at Indianapolis, three miles west of Hilldale, and from there build a road running southwestly about one hundred miles to the line of the Baltimore & Ohio, taking that line at some point west of Milford. It will thus be seen that unless the English folks interfere in the Grand Trunk resolutely refuse to shell out, the Grand Trunk cannot be permanently de-

July 12
1878

The Question Solved.

NOW THE GRAND TRUNK WILL STARVE A CHICAGO CONVENTION.

Since Manager Hickson, of the Grand Trunk, came back from England, he has kept his eyes and ears open and his mouth shut. He has listened politely, may even cordially, to advances from the Vanderbilt interest, who, from an uneasy feeling that he held several trump cards back, have been almost extravagantly liberal in their propositions to do what they call a fair thing. Manager Hickson brought the authority and financial backing with him to do either of two things—to obtain from the Michigan Central such terms as would make unnecessary the construction or purchase of an independent line to Chicago, or failing in that, to acquire and maintain such a route. In the negotiations and conferences between these roads, Vanderbilt has made many important concessions, but he has not conceded the standing demand of the Grand Trunk, for lower rates for freight and passengers, on account of the length and other disadvantages of that road as a competing through line. Mr. Hickson has not specially insisted on a continuance of this self-granted privilege, but has not given the slightest intimation of giving it up. The length of the diplomatic tether seems now to be reached, and the Grand Trunk will shortly show its hand. It has been determined to acquire an independent line over this State, and although the route reported to be chosen is not apparently an advantageous one, it is said to be the best that could be adopted in view of the many complications in the matter. The Grand Trunk will head for Chicago by leaving its own main line at Ridgeway, in this State, and using, first, its own purchased road, the old Air Line, which runs through Romeo and to a point within six miles of Rochester. Here a new road will have to be built to Jackson, a distance of 10 miles; from there it is proposed to use the Fort Wayne, Jackson & Saginaw road, which connects with the Baltimore & Ohio road at Auburn and from that point the Chicago connection, if afforded by the latter road. It will be a longer route than the Michigan Central or any of the great through lines, by at least 30 miles, but has been adjudged good enough for the Grand Trunk.

September

20
1878

Sacramento

Observer

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The Grand Trunk R. R. and Vanderbilt.

We expressed the opinion at the State Fair that general control of the Michigan Central Railroad, and the link from Flint to Lansing in the Grand Trunk's independent Chicago connection from Port Huron, that his victory would prove a barren one, inasmuch as it would be impossible for Vanderbilt to control for any length of time the Grand Trunk's Chicago connection. That the opinion was a second one is verified by the facts as they now exist. We learn from one of our Western papers that the Grand Trunk is moving actively to secure connections independent of Vanderbilt's control, having secured control of a railway reaching from Ridgeway, a station opposite Port Huron and Detroit section, 23 miles from Port Huron, to Washington, Maconia in county, Michigan. This railroad is 20 miles in length. At last accounts a contract to finish a line from Washington to Pontiac had been let. This line only needs the rails, having been graded some years since. The parties will have the extension to Pontiac graded and laid with a six-pound steel rail by the 15th of November. An independent company proposes constructing a new railway to Jackson, Michigan, connecting with the Grand Trunk, in a year or two. This route will give the Grand Trunk a connection with its Buffalo and Huron road, a shorter line from Buffalo to Chicago than the present Vanderbilt routes over Lake Shore and Michigan Southern or Canada Northern. In connection with the near approach of the time

when the Erie's new connection via the Tunnel will be open, this opportunity to secure a connection to Chicago free from Vanderbilt's control is of great importance to Boston. It is rumoured in railway circles that the Great Western Railway of Canada, growing restive under the demands made by Vanderbilt, reducing its proportion of the Blue Line business from 65 per cent. to 50 per cent., proposing to abolish the connection to Chicago independent of the Michigan Central. If the Great Western should carry out the scheme, and its purchase of the Detroit and Milwaukee road a few days since helps the project, we fear the prospects of the stockholders of the Michigan Central, under such a favorite investment here in New England, will not be brilliant in the future, or as long as it continues in the hands of its present speculative controllers. With the Erie's third rail or narrow gauge completed to Albany, and soon to be extended to New York city, the railroads west of Buffalo are not so much in the power of Vanderbilt as they were previously, while Vanderbilt's large interest and dividend account to be met, from their business ~~now~~ ^{now} over the Boston Journal, Sept. 27th.

October 18

1878

Sarnia

CHICAGO TO PORTLAND.

The Grand Trunk's Victory over Vanderbilt.

Detroit, Sept. 4.th - The following is from this morning's *Press*.
Manager Hickson, of the Grand Trunk Railway, arrived in Detroit yesterday morning from Chicago, whether he went to look after the extension of his road. His mission was successful in every particular. On Tuesday he effected a consolidation of the Chicago and State Line and Chicago and State Line Extension Railroads, under the new corporate name of the North Western Grand Trunk Railroad Company. The new company has already let a contract to build a steel railway line between Illinois road from the State line to Valparaiso, a distance of and Indiana to Valparaiso, a distance of twenty-eight miles. The contractors are to deliver the road ready for business on November 1st, 1870. This or before completes a continuous line virtually from Port Huron to Twenty-sixth-street from Chicago.

VANDERBILT FORCED TO SELL.

A contract in telegrams has been made yesterday between the Grand Trunk and Vanderbilt interests for the purchase of the Chicago and North Western road, the missing link between Flint and Lansing, which Mr. Vanderbilt obtained possession of some time ago, and which he now disposes of to the undoubted advantage of the Grand Trunk. The contract has not yet been reduced to writing in exact legal phraseology, but its terms are absolutely settled, and the formal transfer will take place certainly within a fortnight. The terms of the sale have not yet been disclosed. This feature of the negotiations will render the bids for the building of an independent line from Flint to Lansing in response to an advertisement published some weeks ago, never opened. Manager Hickson having all along been reasonably confident of his ability to secure the Chicago and North Eastern. The advertisement for bids seems to have had the desired effect on Mr. Vanderbilt.

THE GRAND TRUNK AT CHICAGO.

In respect to the Grand Trunk outlet at Chicago, Manager Hickson says he expects that through trains will be running from Chicago to Portland by a route exclusively owned by the Grand Trunk before the 1st of September next. All the Grand Trunk representatives throughout the country express themselves as thoroughly satisfied with the arrangements that have been perfected, and they seem to be fully in control of the subject. C. H. Peck will take charge of the operations of the North Western Grand Trunk Company.

September

1879

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SOUTHERN GRAND TRUNK.—General Manager Peck, of the Northwestern Grand Trunk, has returned from a trip over the entire line, having traveled over the route from Alpena to Thornton on horseback. The grading of eleven miles of the gap section has been completed, and work is going forward all along the unfinished portion. The steel rails for the track are on the ground, and there will be no delay in completing the gap section, which it is expected will be open for business on December 1st. The road is to be built in the most substantial manner, with iron bridges over all the streams. Track laying will commence next week. The company have also purchased a large quantity of steel rails for relaying other portions of the track, and 300 tons will soon arrive in Port Huron for the Eastern Division. It is expected that before January 1st, 1879, seventy miles of new steel track will be laid. The bridges on the old section of the line are also to be strengthened, and as speedily as possible iron bridges will take the place of the wooden ones. The new depot at Flint has been completed, and a large and handsome new building is to be built at Lansing as soon as the work can be done. It is evident that the Northwestern Grand Trunk will soon rank as one of the best, if not the very best railroad in Michigan, and the amount of business done by it will no doubt be correspondingly increased.

NOVEMBER 7
1879

Pt. Edward

Mr. Martin invites all customers to step up and settle; get clear receipts for all old scores and so allow him to close up his business and go to Manitoba, where he intends to settle.

Business over the North-Western Grand Trunk has grown so large that strong passenger coaches will be put on the train leaving Port Huron for East Saginaw and Bay City daily at 8 A. M.

A dispatch from Indianapolis says that part of the Chicago and Lake Huron railroad running from Valparaiso, Ind., to the Michigan state line, was sold Monday by Commissioner W. P. Fitch of a committee representing the Grand Trunk railway under a foreclosure of mortgage for \$250,000. The purchasers assume the debts left by the receiver.

November 7

1879

THE ONRAMP WESTERN'S NEW OUTLET.

The Detroit Free Press says: The annual meeting of the Detroit, Hilldale & Southwestern Company, adjourned over from the 22nd inst., will be held in Ypsilanti on the 22nd 13th. The option which Col. J. M. Ashley held for the purchase of the controlling interest in the stock has probably been closed. If so, and the road passes over to Ashley and his associates we are quite likely to have a new line into Detroit before the next harvest. It is known that the Great Western Railway Company of Canada owns stock in the Detroit, Hilldale & Southwestern. By connecting that road with Detroit, and the well understood harmony of interests which now exists between the Detroit, Hilldale & Ohio at Auburn Junction, affording a direct line to Chicago. The distance from Detroit to Chicago by the route indicated is but thirteen miles longer than by way of the Michigan Central. At the same point, Auburn, a connection is made with the Eel River division of the Wabash. It will be seen that the movement is one of great importance and has a direct bearing on the fortunes of several important lines of railroad.

A REDUCTION OF FREIGHT RATES.

A feeling prevails in grain circles that East ward bound freight rates from Detroit, as well as the West, will be reduced the first of next month, as the railroads are suffering from the lack of grain shipments. It is generally regarded that it would be contrary to the best interests of the railroads to maintain rates at their present high position, as it would result in the blockade in grain continuing till spring, when shipments could and would undoubtedly be made largely by water. Rufus Hatch, in an interview with a reporter of the New York World Wednesday of this week, said, in reply to the question:

"Can you predict any immediate change in freight rates?"

"Either there will have to be a reduction of one-half of the present railroad tariff, or else the grain will remain in the West and will be shipped by lake, and canal this spring."

In answer to the inquiry, "Why don't the people of the West petition for a reduction of freights?" he said:

"There is but one man to petition, and he is our railroad king"—Mr. Wm. H. Vanderbilt. He controls directly or indirectly all the railroads during close of winter communication between Chicago and the seaboard cities. Mr. Fink, the Commissioner of Pooling arrangements, is probably his clerk. When Mr. Vanderbilt says that rates shall be lower than they have been or are now, Mr. Fink is very certain to obey his orders."

He closed his interview with the pertinent remark:

"The railroad syndicate are the persons to whom the western farmers must look for relief without paying any attention to the fact that the warehouses at Chicago are full."

January

19

1880

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Chicago & Grand Trunk.

From the 2nd day Trunk, Chicago.
General Manager Hickson, of the Grand Trunk, accompanied by a large staff of officials both from the main line and the Chicago branch, arrived in the city yesterday to complete the arrangements for the opening of the new line to this city, and to transact other business connected with the Northwestern Grand Trunk. The gentlemen who are with General Manager Joseph Hickson are W. J. Spicer, General Superintendent; M. Walker, General Auditor; A. J. Reed, Private Secretary; counter: A. J. Reed, Private Secretary; John Blackwell, Master Mechanic, and several others of the Grand Trunk Railway; C. B. Peck, General Manager; F. W. Meldaugh, General Solicitor; Henry Funnel, General Superintendent; J. C. James, Chief Engineer; Chas. Percy, Treasurer; C. W. Prescott, Master Mechanic, and several others of the Northwestern Grand Trunk Railway. There also arrived with Mr. Hickson the Hon. J. B. Brown, of Montreal, one of the leading stockholders of the Northwestern Grand Trunk, who makes a tour of inspection of the property in which he is so largely interested. After getting through this work Mr. Brown intends to extend his trip as far west as the Pacific Coast. During yesterday afternoon the Directors of the Illinois and Indiana Divisions of the new road held a meeting at the Palmer House. This is one of the series of meetings held during the week at various points along the line to make preparations for the consolidation of the various sections of the Northwestern Grand Trunk Railway, which is hereafter to be known as the Chicago & Grand Trunk Railway, and to through the usual crystallizing process of exchanging the old sectional bonds for the new consolidated bonds of the Chicago & Grand Trunk.

President Hickson and General Manager Peck, of the new line, have just made a tour of inspection of all the property in Indiana and Michigan, and will inspect that of the Illinois Division Monday. The arrangements with the Burlington for the use of the latter's track from Twenty-sixth street to the corner of Canal and Sixteenth streets, where the freight-houses of the Burlington will temporarily be made use of by the new road, will be completed during this visit of the Grand Trunk people, and it is the intention to open the road for freight traffic between the 25th and 28th of this month. They are also perfecting their freight facilities, increasing the freight equipment largely, providing for sufficient motive power, and doing everything else necessary to meet the wants and necessities of the new line when opened. They hope and expect that the shippers here and in the west will appreciate their efforts to furnish them additional facilities for the transportation of freight to the east, and in return give their agents a proportionate share of the business. The Grand Trunk officials will remain in the city throughout the week.

General Manager Peck says that for the present the road will be opened for freight business only. No passenger business will probably be done until next summer. They have yet to lay 100 miles of steel rails, and make other improvements, before they will be able to compete for the passenger traffic. When they do start in, they mean to have their line in as good a condition as any road now leading to the east.

January 23
1880

Opening of the G. T. Railways

Monday last was the day positively announced for opening the Grand Trunk Railway from Detroit to St. Mary's; and the expectation of a considerable portion of our town's people were, for the event, which certainly must be the opening of a new era in the history of Barrie. The day was somewhat hazy and lowering, but nevertheless, the train Detroit made its appearance about 10:30 o'clock, consisting of three passenger cars and one freight car. A considerable number of passengers were eastward bound, and these transferred from the one side of the river to the other with considerable despatch, and took seats in the cars on this side, proceeding to Detroit only intended to come over as far as Sarnia, and those, to the number of sixty or eighty, after taking a survey of our town yesterday, after taking a survey of our town, the lead of Hon. M. Cameron said the train would return to Detroit by the afternoon train. I understand they generally express themselves pleased with the appearance and progress of the place, which on these points is far ahead of my anticipations.

The train from the east arrived in the noon, having on board a number of freight cars from Toronto and other places along the line who took the first opportunity afforded them of paying a visit to Detroit by the new mode of travel, which may now be said to be fully and permanently established. The fare from Detroit we learn is fixed at \$1.75; and present arrangements a person can leave Huron at 8, arriving at Detroit at 11:45, returning, can leave Detroit at 3, arriving at Port Huron at 6:55, P.M.; so that any one going two or three hours' business in Detroit can now accomplish it in one day, and at less expense and with greater convenience than by the river route.

Going eastward, we understand the fare to Toronto is fixed at \$5. The eastern train leaves the Depot building at Point Edward at 10.10, a. m., arriving at Toronto at 5:15, P. M. and at Portland at 8, P. M., of the following evening—the time between Detroit and Portland being then thirty-seven hours and a half. Coming west the train leaves Portland at 9:45 A. M., arriving at Monroe at 11:10, A. M., and at Detroit at 11:45, P. M., of the following day, arriving here at 6:20, and at Detroit at 10, P. M., in time to connect with the night express train going west on the Michigan Central Road. Under this arrangement passengers going from the west to Europe, or turning from that country, can now do so with unexampled celerity, and with every desirable comfort, there being sleeping cars on the Grand Trunk Railway on all the Night Express trains.

We understand the line is doing an extensive freight business, since it opened; large quantities of flour, pork, beef, &c., the produce of the Canadian ocean steam packet line, are not going west, being conveyed from Detroit to Port Huron, to be there shipped to England. Yesterday a considerable lot of South-western cotton was sent by this route; so that it would appear our cousin in the west (who by the bye has sprung up under the Reciprocity treaty, the advantages of which are certainly mutual; but rather that the principle will extend until it embraces a wider range of products than at present; and likewise that, with reference to such articles as are to continue to be subject to duty, the scale of the tariff will be more liberal than it is at present.)

November 25

1859

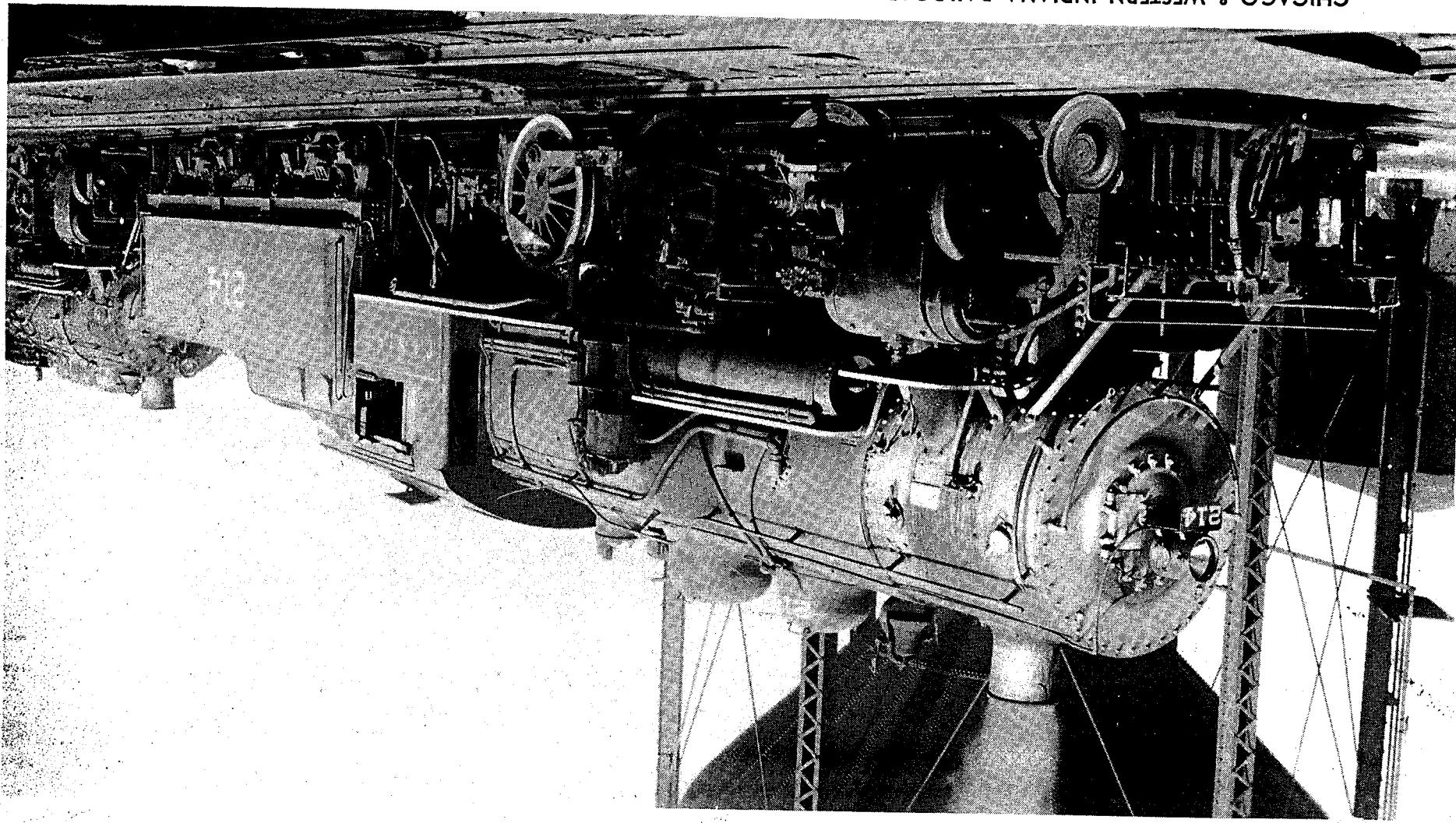
Sarnia
Observer

NO. 214

CHICAGO & WESTERN INDIANA RAILROAD

go's Dearborn station, until the recent de-
seleitzation, and could also be found on the
roads' line to Dohlon doing the local freight
and passenger run. Gay Photo.

This husky mogul bears the builder's number 1320 of the Lima Works and was turned out in 1914. Class J-2, the 214 and sister engines were familiar sights at Chicago.

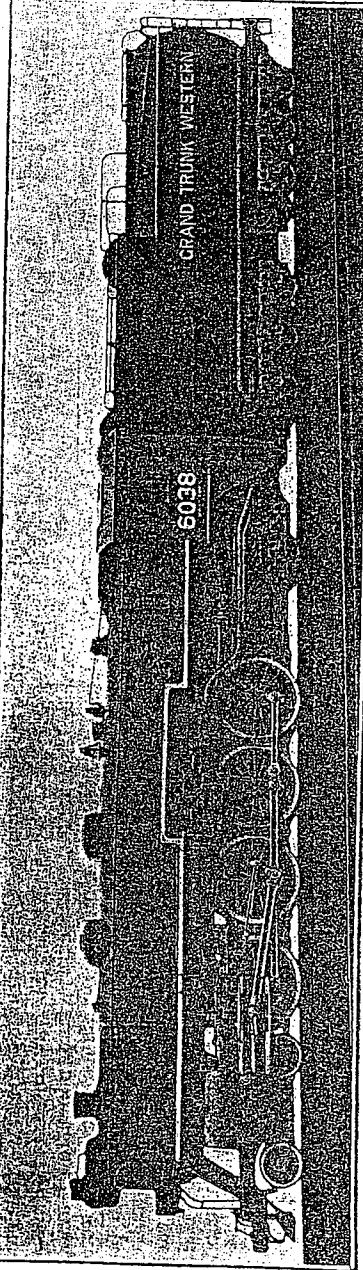


TO CONNECT WITH G. T. R.

The New Road From Toledo to Detroit.

Toledo, O., April 20.—Official announcement was made here today that in the near future the Clover Leaf will run trains through to Detroit. The contract has been let to W. E. Strange for the construction of the road between Trenton and Delray, and, when this road is completed, a connection with the Grand Trunk will be had at Delray. This very materially changes the plans of the road.

Instead of using the Michigan Central terminal, as originally planned, the independent connection will be built, and it is also stated that instead of the Grand Trunk running passenger trains into Toledo its business will be taken care of by the Clover Leaf, which will operate the Detroit & Toledo shore line.



Mountain 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 five Mountain type locomotives from the Baldwin Locomotive Works, Philadelphia, Pa., 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 $\frac{1}{4}$ 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).

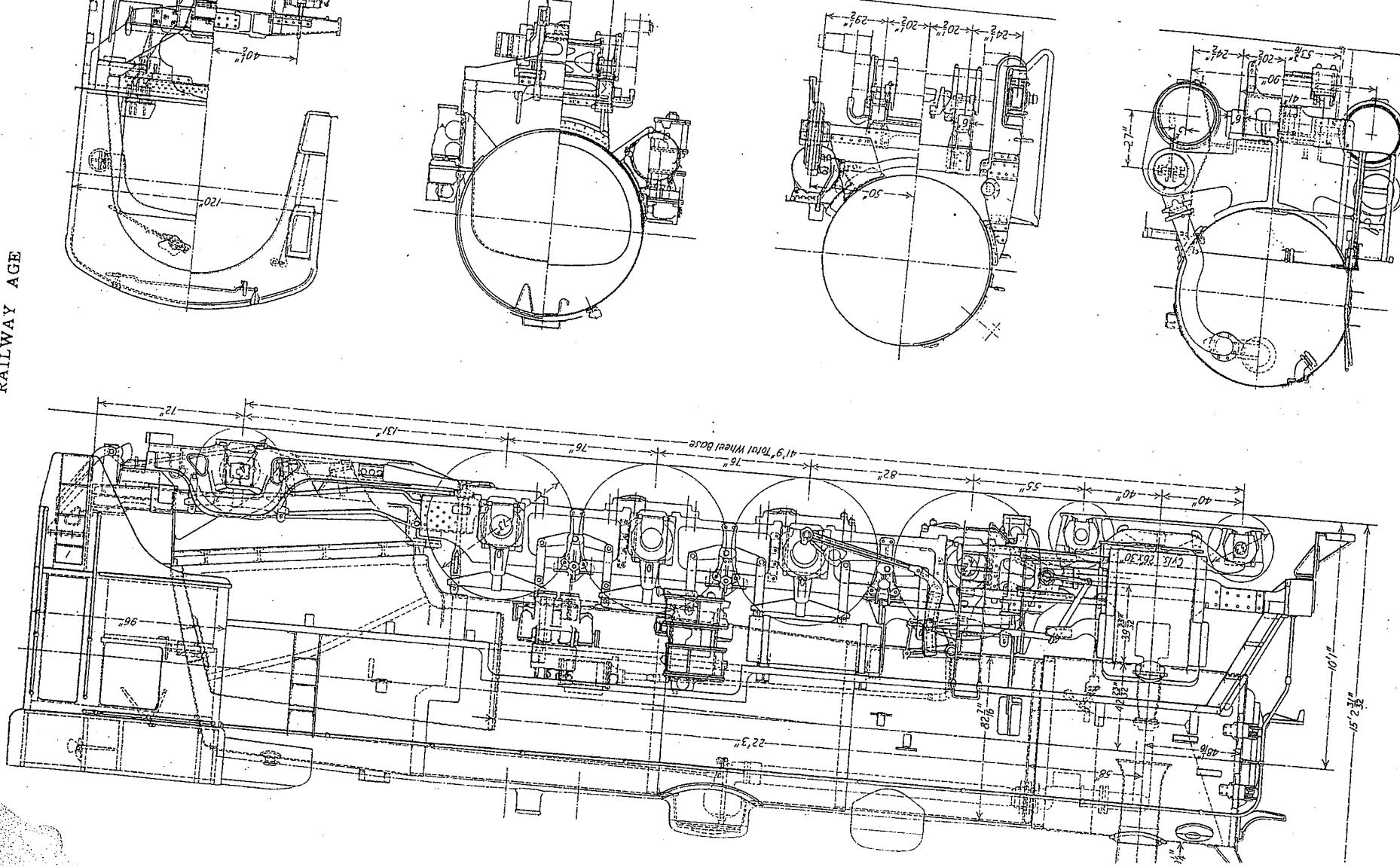
The principal dimensions and data for the locomotives are shown in the following table:

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.	$\frac{1}{4}$ 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.
Tender	354,110 lb.
Wheel bases:	
Driving	25 ft. 4 in.
Rigid	19 ft. 6 in.
Total engine	12 ft. 3 in.
Total engine and tender	41 ft. 9 in.
Wheels, diameter outside tires:	
Driving	80 ft. 3¾ in.
Front truck	73 in.
Trailing truck	33 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	6 in. by 14 in.
Boiler:	
Type	Straight top.
Steam, pressure	20 lb.
Pitch, kind	Blown-in.
Firebox, length and width.	114½ in. by 8½ in.
Height mud ring to crown sheet, front	6 in.
Height mud ring to crown sheet, front	3½ in.
Arch tubes, number and diameter	.362 in. by .4 in.
Combustion chamber length.	
Tubes, number and diameter.	40, 5½ in.
Flues, number and diameter.	188, 2½ in.
Length over tube sheets	22 ft. 3 in.
Grate area	66.7 sq. ft.
Heating surfaces:	
Arch tubes	280 sq. ft.
Tubes and flues	327 sq. ft.
Total evaporative	3,511 sq. ft.
Superheating	4,038 sq. ft.
Comb. evaporative and superheating	1,048 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

RAILWAY AGE

August 15, 1925

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



a heavy eastbound refrigerator car traffic for years, and it was on the eastbound track that most of the trouble was experienced. The thoroughness of the brine impregnation is shown by the fact that the ballast in drying out after a shower is almost white with the salt crystallized on the surface. This trouble is, of course, aggravated by the fact that much of the ballast is kept constantly moist through capillary attraction from the ground water below.

While the resistance of this ballast when dry is about normal—5 to 6 ohms per 1,000 ft.—during very wet summer weather this resistance amounts to only about 0.3 ohm per 1,000 ft. This change in ballast resistance takes place rapidly during warm summer rains, 10 minutes often being sufficient for it to drop to 0.6 ohm per 1,000 ft. The temperature has a very marked effect on this action. A cold rain will not reduce the ballast resistance to anywhere near the point that the same amount of precipitation will if the temperature is higher. The only explanation of this fact seems to be that the solubility of the salt increases with the rise in temperature, thus giving a path of low resistance for the leakage current due to the increased amount of salt dissolved in the water. A steady light rain appears to reduce the ballast resistance more than a heavy rain, probably due to the fact that the heavy rain washes much of

NEW ALTERNATING CURRENT SIGNAL INSTALLATION ON THE GRAND TRUNK

The marked advantages of alternating current power for the operation of automatic signals under certain conditions, even when a line is not electrified, are well illustrated in the installation on the Grand Trunk between Chicago & Western Indiana Junction and Thornton Junction, recently placed in service. This 19-mile section lying partly within the city limits of Chi-



Transmission Line and Control Wires at the Right
New Alternating Current Signaling on the Grand Trunk in Illinois

cago carries a heavy traffic, including through passenger and freight, suburban passenger, and all Chicago freight transfer business. This work completes the automatic signaling of the double-track main line of the Grand Trunk from Chicago to Granger, Mich., approximately 108 miles.

UNUSUAL TRACK CIRCUIT CONDITIONS

The track conditions on this section of line made the operation of track circuits unusually difficult, and it is probable that certain of the blocks could never have been operated satisfactorily with ordinary direct current circuits. Two factors are principally responsible for this condition, the impregnation of the ballast and ties with brine drippings, and the high ground water level, found in the swampy country in which most of this section of the line is located. The Grand Trunk has had

a heavy eastbound refrigerator car traffic for years, and it was on the eastbound track that most of the trouble was experienced. The thoroughness of the brine impregnation is shown by the fact that the ballast in drying out after a shower is almost white with the salt crystallized on the surface. This trouble is, of course, aggravated by the fact that much of the ballast is kept constantly moist through capillary attraction from the ground water below.

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the salt away, while the former allows it to more thoroughly impregnate the ties and ballast.

A further harmful effect of these brine drippings is that a coating of rust scale has been formed on the rails and angle bars; and this scale, being a good insulator, forces practically all of the track current to flow through the bond wires instead of a considerable portion flowing through the angle bars and the abutting rail ends. This materially increases the total rail resistance and impedance. A recent test on rails similarly coated in D. C. territory showed that the cutting of the bond wires at one joint in the eastbound track resulted in a reduction of the current through the relay of 40 per cent, while on the opposite section of the westbound track, under similar conditions except that the rail was practically free from scale, a similar cutting of the bond wires caused a reduction of only

11 per cent in the relay current. As a result of this test, three copper-clad bond wires were placed at each joint on the eastbound track, instead of two iron wires; but in certain cases even this treatment did not remedy the trouble, and where the length was over 3,000 ft. the section had to be shortened to secure satisfactory service.

On account of the comparatively short block length—averaging slightly less than a mile—which was found best suited to the traffic on the section recently completed, it was decided when the plans were made that it would be possible to operate A. C. track circuits of full block length in all cases. The circuits were installed according to this plan; but it was found that satisfactory operation could not be obtained during the warm summer rains, and 18 of the sections had to be cut in two, and in one case the length was reduced to about 1,800 ft. before satisfactory operation under all weather conditions could be obtained.

ADOPTION OF ALTERNATING CURRENT

In addition to the fact that the adoption of an alternating current system made it possible to install track circuits on a section which would have been impossible to operate with ordinary d. c. circuits, the availability of A. C. commercial power at reasonable rates, and the possibility of lighting the signals and the station buildings from the transmission line, were also important considerations. The lighting feature, especially, has proved most successful as shown by the fact that at present the lighting load is approximately twice the signal load. Power is bought under a wholesale contract at a cost of approximately three cents per k.w.-hour, and this cost will be even less as the load increases. Previously, these lights were supplied with current metered at many points at retail lighting prices, amounting to 8 ct. per k.w.-hour. This saving, if capitalized, would go a long way toward paying the first cost of the transmission line. A further advantage results from the fact that with cheap lighting the road equips electrically even its smallest stations within this zone, thus giving better service to the patrons of the road at a cost that is practically the same as for oil lamps. In view of the numerous lines in this territory from which power could be obtained, it did not seem advisable for the company to generate its own current. A substation serving the entire line was put up at Epsdon, which is the center for the combined signal and lighting load, and power was secured from two independent 2,200-volt distributing circuits which cross the right-of-way a short distance each side of this point. In this substation, which is a portable 9-ft. by 13-ft. reinforced concrete building, the power is transformed to 4,400 volts, at which potential it is transmitted along the railroad to both ends of the section.

A steel core stranded aluminum cable of a resistance approximately equal to that of a No. 6 B. & S. gage hard-drawn copper wire is used for this high-tension line. The reasons that led to the use of aluminum instead of copper were: First, greater mechanical strength together with less weight; second, its greater ability to withstand rough treatment without serious damage; and third, a small saving in first cost. No. 10 B. & S. gauge, 40 per cent bare copper-clad line wire is used for the low-tension control circuits and a clearance of 6 ft. is maintained between high and low tension lines. The high-tension transmission line is sectionalized at four points about five miles apart, thus minimizing the zone affected in case of a line failure.

SIGNAL CONTROL AND OPERATION

The transmission line voltage is transformed to 110 volts at signal locations, which is used for the operation of the 60-cycle single-phase induction motors in the G. R. S. model 2-A bottom post signal mechanisms. The 110-volt current is in turn transformed down to the track and lamp voltages, a separate track transformer being used for each section. The 3-position, upper quadrant signals are lighted by 2 c.p., 6-volt tungsten lamps, burning in multiple, which are operated on 5 volts. This has been found to give sufficient light and materially increases the life of the lamp.

Except in special cases, G. R. S. model 2-A, 3-position track relays, with 110-volt locals, are used in the signal control circuits. However, in a case where there are facing point switch in the block, a separate 45-deg. line control circuit is used, this is broken through all facing-point switches. The switch are equipped with double shunt wires and this protection also is relied on for the trailing point switches. Switch indicators are provided for all main line switches except those local in yard zones where switching is constantly going on. In these cases the indicators would be in the stop position so large portion of the time as to be practically valueless. The indicators are normally energized, 0 to 90 deg., upper-quadrant semaphore type, it being thought that with the normally energized type there is less likelihood of trainmen neglecting the indication. All indicators are clearly marked to show whether they refer to movements on the eastbound or the westbound track, such information being of material interest to trainmen, particularly at crossovers, in familiarizing themselves with the use of the indicators.

INTERLOCKING PLANTS

At the two interlocking plants within the limits of this installation, the mechanical home and distant signals on the Grand Trunk were replaced by 3-position, semi-automatic A. C. signals incorporated with the automatic block system. Route locking was installed for the Grand Trunk high speed route, and vector locking is effective when the home signal lever is reversed. The latter feature allowed the removal of the crossing bars. For each route, disk type indicators are provided for the track sections between derails and for the track sections extending from the backup dwarf signal to the next automatic block signal in advance. Semaphore type repeaters were provided in the towers only for the distant signals. Approaching announcements are not provided, except for eastbound movements in the Blue Island plant, a telephone circuit being installed in their place between Thornton Junction and Harvey and Blue Island plants. The eastbound announcement at Blue Island was necessary, since there is no interlocking west of that point for some 13 miles. Levermen are required to telephone the station in advance of the approach of train to the despatching line, allowing the levermen to get information from the despatcher.

This work has been installed under the supervision of signal engineer's office of the Grand Trunk. We are indebted for the foregoing information to B. Wheellwright, assistant signal engineer.

January
1916

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

By R. L. Gibbs

plish 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.

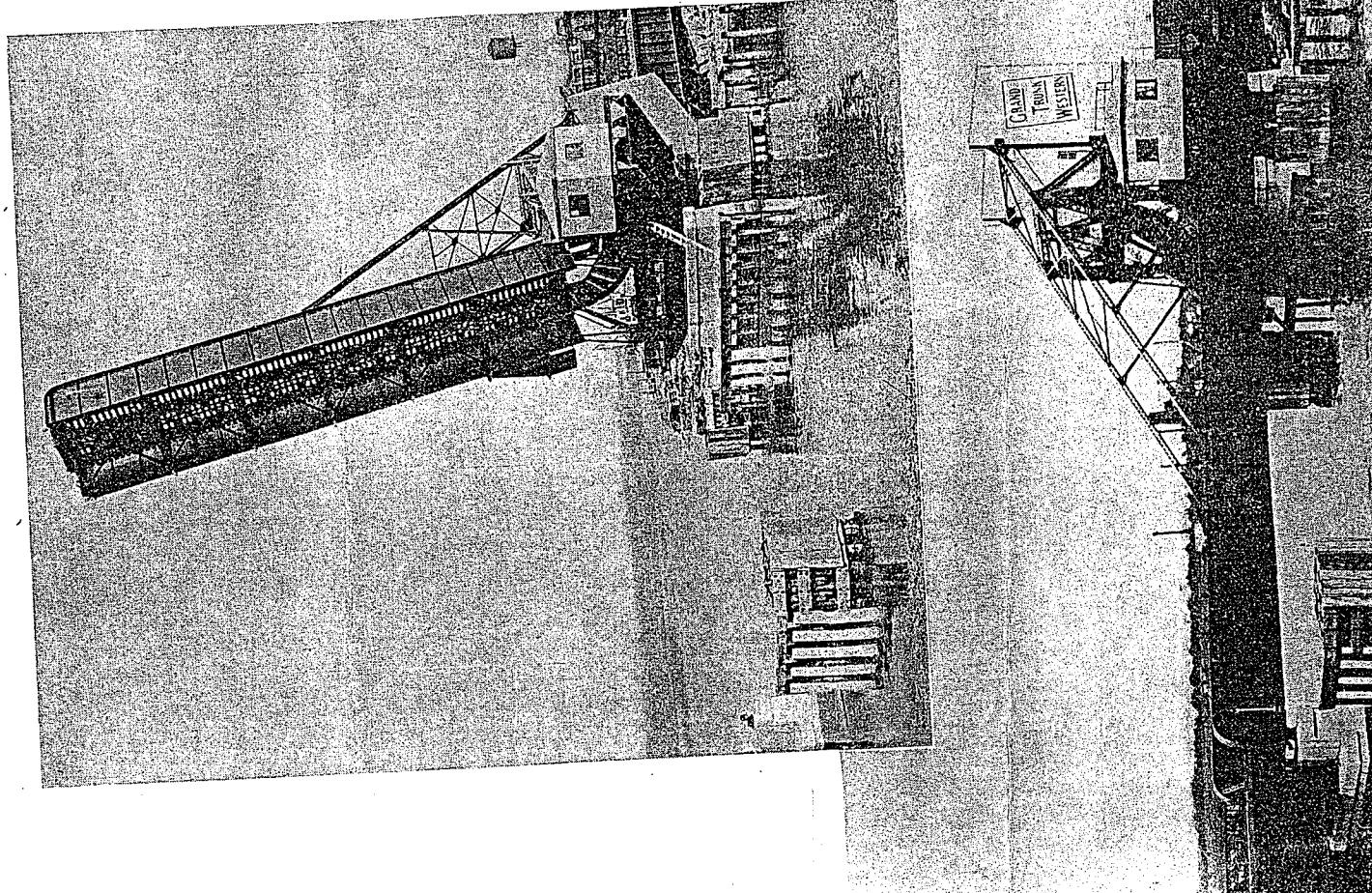
The problems with which the Grand Trunk Engineers

had to contend were many. The first problem was to find a site for the bridge. The river bed was rocky and uneven, making it difficult to find a suitable foundation. The bridge had to be built on piles, which had to penetrate deep into the bedrock. The piles had to be driven in straight and true, otherwise the bridge would not be able to support its own weight and that of the trains passing over it.

The second problem was to design a bridge that could withstand the forces of wind and water. The bridge had to be strong enough to support the weight of the trains and the impact of the waves during a storm.

The third problem was to ensure that the bridge could be easily maintained and repaired. The bridge had to be designed in such a way that it could be easily accessed for maintenance work.

The fourth problem was to ensure that the bridge could be safely crossed by pedestrians. The bridge had to be designed with a safe and accessible walkway for pedestrians.



tract for the substructure was awarded, plans had been worked out which have their expression in a very sensitive adjustment of the completed structure. The two abutments penetrated deep into the banks on either side and, on the east bank, quicksand was encountered which called for a pile foundation. However, the most difficult work was done on the three piers, two of which, designed for the track girder, required for their construction a 60 foot square coffer dam. The foundations are on footings 23 feet below the water level and rest on 100 piles each, the latter driven 25 feet in blue clay, with points nearly 50 feet below water level. As usual, where coffers are required, the work is hazardous and subject to many unforeseen delays. Most of the substructure work was done in the winter months and without any major accidents in which workmen were injured.

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

The steel installation included approach spans of 79 feet on either shore, a 23-foot bascule track girder and a roller 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 rearranged 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 oxidation, the enemy of all things made of steel, can be held at bay for 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. T. Murphy acted as Inspector of construction. The design and a plan of the bridge were

MAY 1930

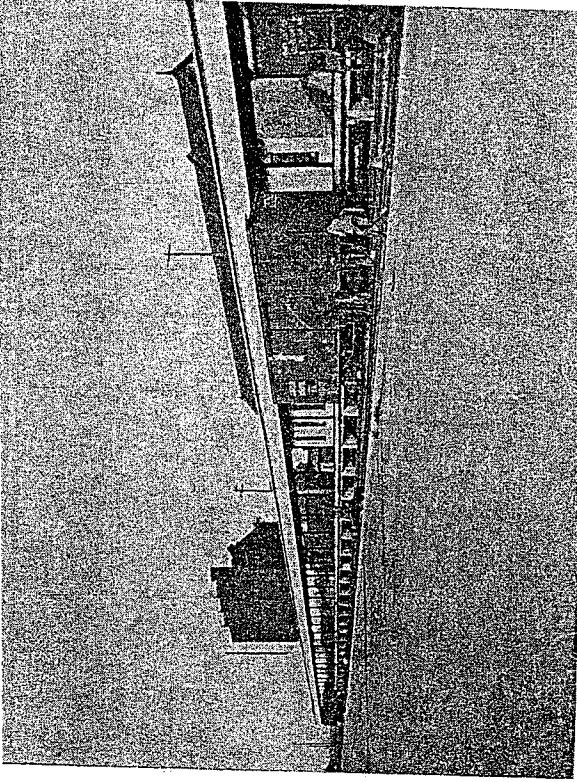
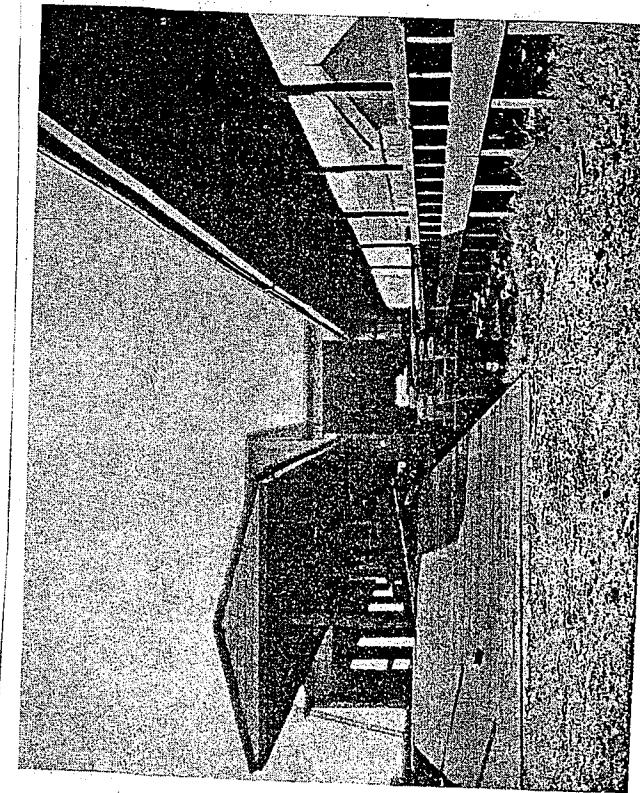
The transfer platform, at the new Elsdon freight station, Chicago, Ill.

New Facilities For Chi-

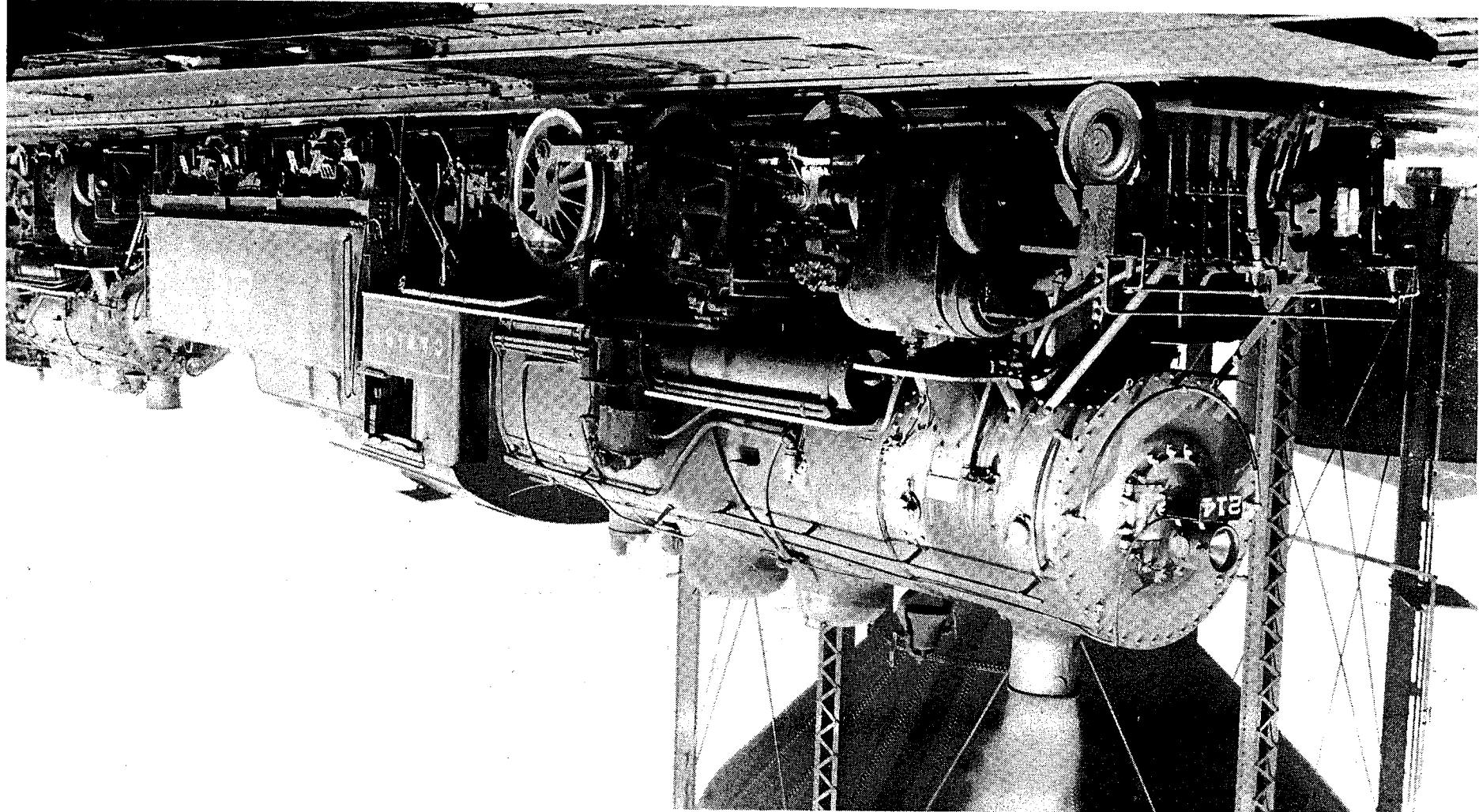
THE new Elsdon Freight Station has commenced operation. The station is located a few feet back from Kedzie Avenue, Chicago, in the neighborhood of 50th Street, and the building and tracks extend west for approximately two blocks. The equipment consists of a modern stone and brick structure, which comprises a commodious and well-equipped office, suitable for a small clerical force, and a warehouse with eight receiving doors, opening on a cemented driveway, a team track to accommodate about 10 cars, and a long transfer platform with a car capacity of about 75 cars for inbound and outbound tonnage. The building is equipped with a basement, housing a heating plant and modern toilet accommodations for the warehouse force, and the entire plant is electrically lighted and fireproof. At the western end of the transfer platform is an office for the Canadian Customs Inspector and clerk.

It is expected that a permanent "set" of cars will be maintained and this will be an exact duplicate of the loading arrangements in force at the downtown freight shed, with the exception that only non-perishable freight will be received here. Freight will be received at the doors up to 3:30 p.m., each working day and, if deemed necessary, empties and loads will be pulled out and reset each noon hour, in order to insure prompt handling of all tonnage delivered either by truck, or trap car. The close location of the plant to the yard at Elsdon is a great advantage and there is a still greater advantage to the shipper in the fact that this station is now readily accessible to the central manufacturing district, wherein is situated the great bulk of the South Side manufacturing and warehouse business. A Canadian Customs Inspector will personally supervise, and bond daily merchandise cars for London, Hamilton, Toronto and Montreal, in the same manner as is done at the downtown freight house.

Central Manufacturing District now Served by Elsdon Freight Station -- A Chronicle of Interesting Events on Grand Trunk Western Lines



CHICAGO & WESTERN INDIANA RAILROAD NO. 214



go's Dearborn station, until the recent disappearance, and could also be found on the roads' line to Dolton during the local freight and passenger run. Gay Photo.

This husky mogul bears the builder's number 1320 of the Lima Works and was turned out in 1914. C&WI class J-2, the 214 and sister engines were familiar sights at Chicago.

Moguls for the Chicago & Western Indiana

The development of heavy switching locomotives is well exemplified in the engines of this type lately built for the Chicago & Western Indiana Railroad Company by the Lima Locomotive Corporation. The designs for these engines were prepared by the locomotive builders according to the specifications submitted by the railway company, and, although they represent nothing radical, they do exemplify the modernization of the heavy switching locomotive.

Our illustration shows the 2-6-0 type, generally known as the Mogul type of locomotive. They are quite similar to those previously furnished to the Chicago & Western Indiana Railroad Company by other builders, but they have been improved along the lines of service experience with the earlier ones. The journals have been made larger than the previous engines and improvements have been made to the side rod and guide yoke to facilitate taking down the front

curves and various conditions of the track. The tenders of these engines are of special design arranged with the fuel collar set in at the edge of the water leg to allow unobstructed view by the engine man. This arrangement was suggested by the railroad company in accordance with their experience with other tenders of the same capacity which had high coal boards, and which were ill-adapted for the service conditions on this account. The suggested improvement was worked out by Lima Locomotive Corporation and resulted in a handsome tender of rather unique appearance.

The general dimensions of these engines are as follows:

Gauge, 4 ft. 8½ ins.

Cylinders, 23 ins. by 28 ins.

Valves — Piston, diameter, 14 ins.; maximum travel, 6½ ins.; steam lap, 1 in.; exhaust clearance, 1/16 in.; lead, constant,

¼ in.; motion, Baker.

Boiler—Straight top; stayring, radial; 32. Ratio of adhesion, 4.6.

Weight—On drivers, 165,200 pounds; on leading truck, 29,400 pounds; total, 194,-600. Total weight of engine and tender in working order, 335,600 pounds.

Wheel Base—Driving, 15 ft.; total wheel base, 24 ft. 1 in.; wheel base engine and tender, 56 ft. 10¾ ins.

Service—Mixed.

Fuel—Bituminous coal.

Superheater—Schmidt, number of units,

32.

Weight—On drivers, 165,200 pounds; on leading truck, 29,400 pounds; total, 194,-600. Total weight of engine and tender in working order, 335,600 pounds.

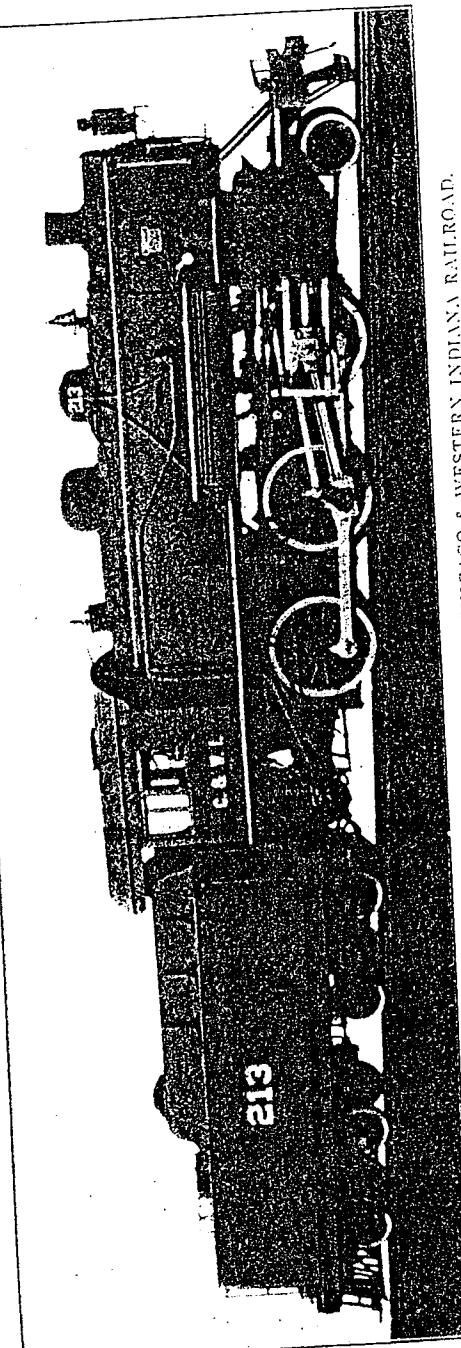
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MOGUL, 2-6-0, TYPE OF LOCOMOTIVES FOR THE CHICAGO & WESTERN INDIANA RAILROAD.

section of these rods. Strictly speaking, the engines are for interchangeable service and not for switching service exclusively. The Chicago & Western Indiana operates a limited suburban schedule, and the Mogul engines are used in passenger service as well as in freight traffic and switching operations. They are equipped with a peculiar design of stub pilot, which has been developed by this railway company, and which embodies the conditions necessary on a pilot for road service, and also the conditions necessary for a switching step. They are equipped with brick arch and superheaters and are therefore fully modernized in fuel saving devices. The steam is delivered through outside steam pipes and the piston valves are operated by Baker gear. Market main rod ends are used. They are possibly the heaviest Mogul locomotives now in service and represent an ideal engine for short runs in interchangeable service and for operation on sharp

curves and various conditions of the track. The tenders of these engines are of special design arranged with the fuel collar set in at the edge of the water leg to allow unobstructed view by the engine man. This arrangement was suggested by the railroad company in accordance with their experience with other tenders of the same capacity which had high coal boards, and which were ill-adapted for the service conditions on this account. The suggested improvement was worked out by Lima Locomotive Corporation and resulted in a handsome tender of rather unique appearance.

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Fuel—Bituminous coal.

Superheater—Schmidt, number of units,

32.

Working pressure, 180 pounds; outside diameter, first rim, 76¾ ins.

Firebox—Length, 108 ins.; width, 69⅓ ins.; thickness of sheets, 3 in. and ½ in.; water space, 4½ ins. and 4 ins.

Tubes—Material, steel, No. 201; diameter, outside, 2 ins.; thickness of tubes, 13 ft. 7 ins.

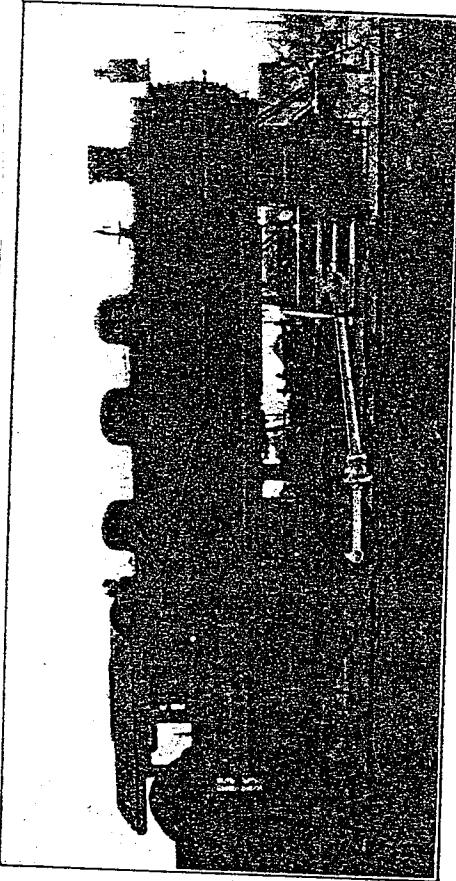
Heating Surface—Firebox, 185 sq. ft.; tubes and flues, 2,028 sq. ft.; total, 2,213 sq. ft.; superheating surface, 340 sq. ft.

Driving Wheels—Diameter, outside, 63 ins.; thickness of tires, 3½ ins.; journals, 11 ins. by 13 ins.; truck wheels, diameter, 33 ins.; truck journals, 6½ ins. by 12 ins.

Tender—Frame, 10 ins. by 13 ins. channels; wheels, diameter, 33 ins.; material, rolled steel; journals, 5½ ins. by 10 ins.; water capacity, 7,750 gals.; coal capacity, 8 tons.

Excellent Record of Lima Locomotives.

Last year the Chicago & Western Indiana Railway have had in service ten 24 x 28 eight wheel switchers built by the Lima Locomotive & Machine Company, of Lima, Ohio. These locomotives have been giving excellent satisfaction, and the railroad company are well pleased with the first-class material and workmanship embodied in construction of the same. The order was filled by the locomotive company in three months. This was an excellent record for any locomotive works to deliver on exact time agreed upon. The following is a general description of the locomotives as built at the Lima works:



EIGHT-WHEEL SWITCHERS FOR THE CHICAGO & WESTERN INDIANA R. R.
Lima Locomotive and Machine Co., Builders.

Traction effort, 43,290 lbs.

Weight on drivers, 201,000 lbs.

Weight engine and tender, 342,500 lbs.

Wheel base.—Driving, 15 ft. 6 ins.; engine and tender, 51 ft. 4 ins.

Diameter drivers, 57 ins., all flanged 5½ ins. wide; main driving axles, 10 ins. x 13 ins.; others, 9½ ins. x 13 ins.

Cylinders, simple, 24 ins. x 28 ins.

Valve gear, Stephenson.

Steam pressure, 180 lbs.

Boiler type, extended wagon-top, wide fire-box.

Boiler.—Diam. smallest ring, 74¾ ins.; diam. at wagon-top, 80¼ ins.

Heating surface.—Fire-box, 165.95 sq. ft.; tubes, 2,832.14 sq. ft.; total, 2,983.09 sq. ft.

Grate area, 41.2 sq. ft.

Fire-box.—Length, 108 1-16 ins.; width, 60¼ ins.

Fuel, bituminous coal.

Tubes, "Mabé" steel, 327 2½ ins. x 14 ft. 9 9-16 ins. over sheets.

Tender.—Coal capacity, 11 tons; water capacity, 7,400 gals.

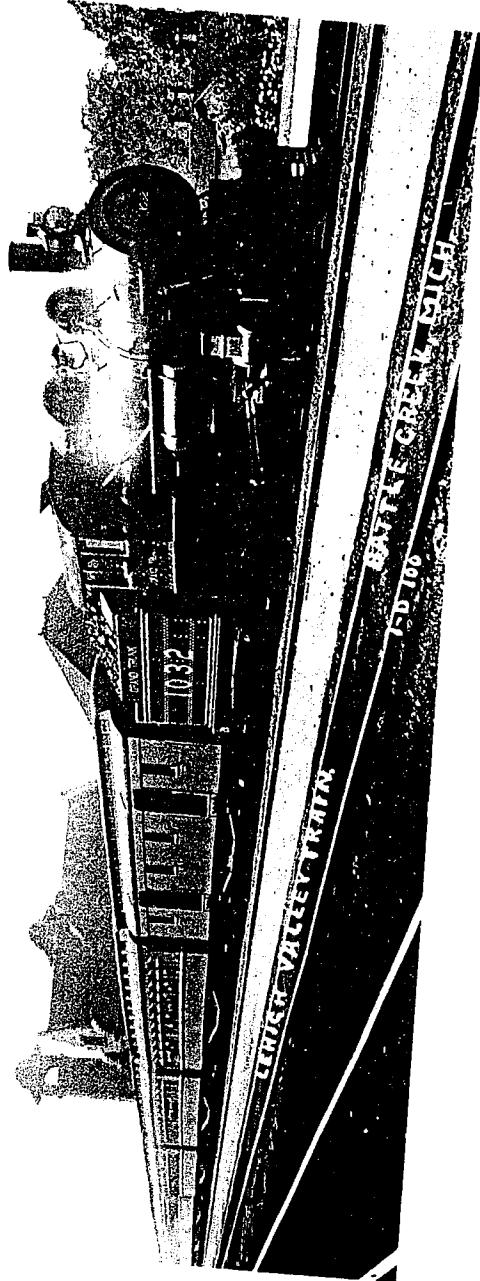
Brakes: Westinghouse American No. 6 ET Equipment, 8½ in. Cross Compound Pump.

Bettendorf tender truck side frames and spring planks.

Sharon couplers, Ohio injectors, Chi-

ago C lubricator, Crosby pop valves,

The thru train from Chicago to New York City via the Lehigh Valley Railroad pauses at Battle Creek, Mich. The photo was not dated, but was most likely taken around 1915. The Lehigh Valley operated a number of thru trains with Grand Trunk and later Canadian National. (C. A. Rogers and Sons Collection)

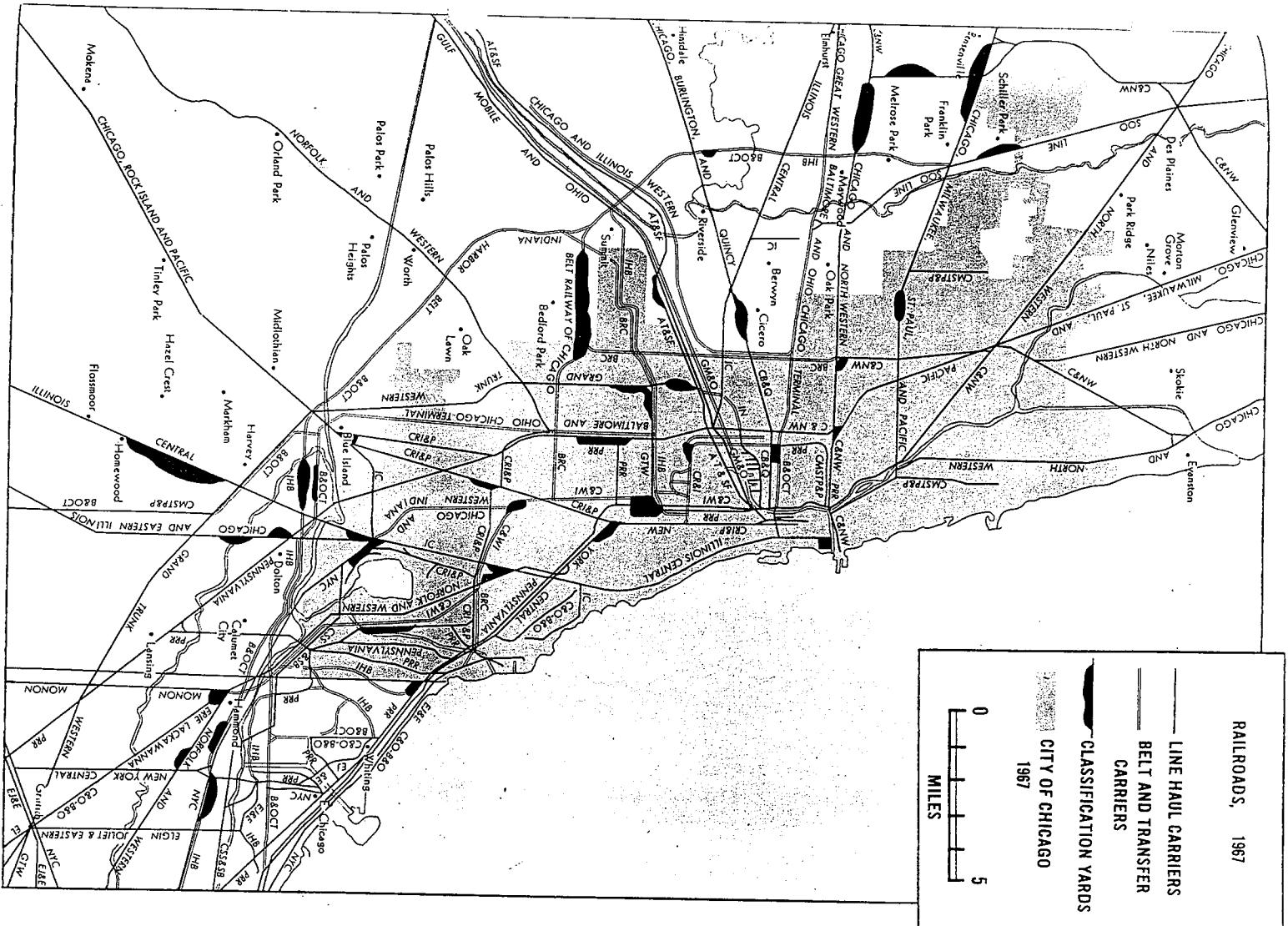


RAILROADS,
1967

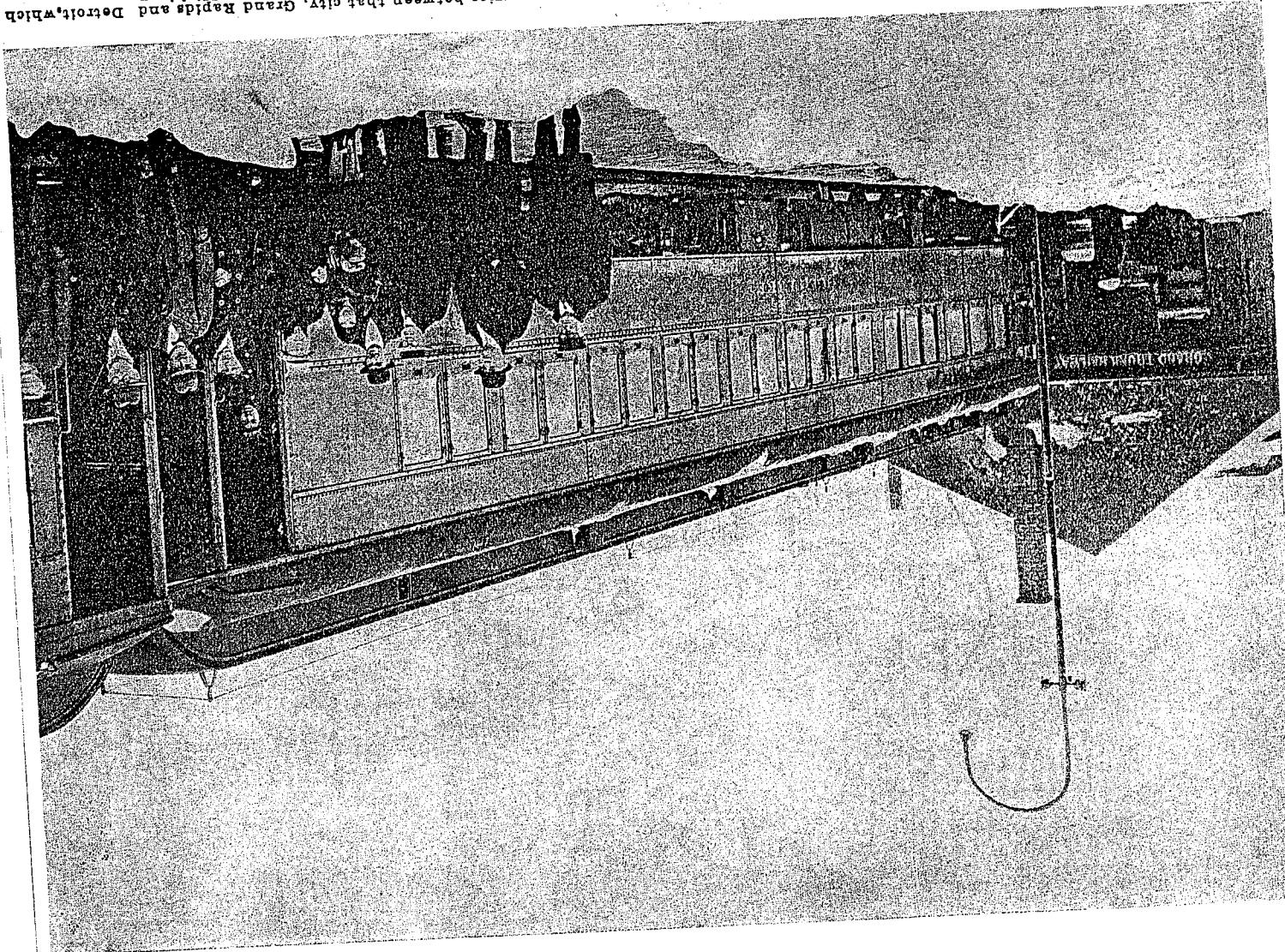
1961

MILES

**- LINE HAUL CARRIERS
- BELT AND TRANSFER
CARRIERS
- CLASSIFICATION YARDS**

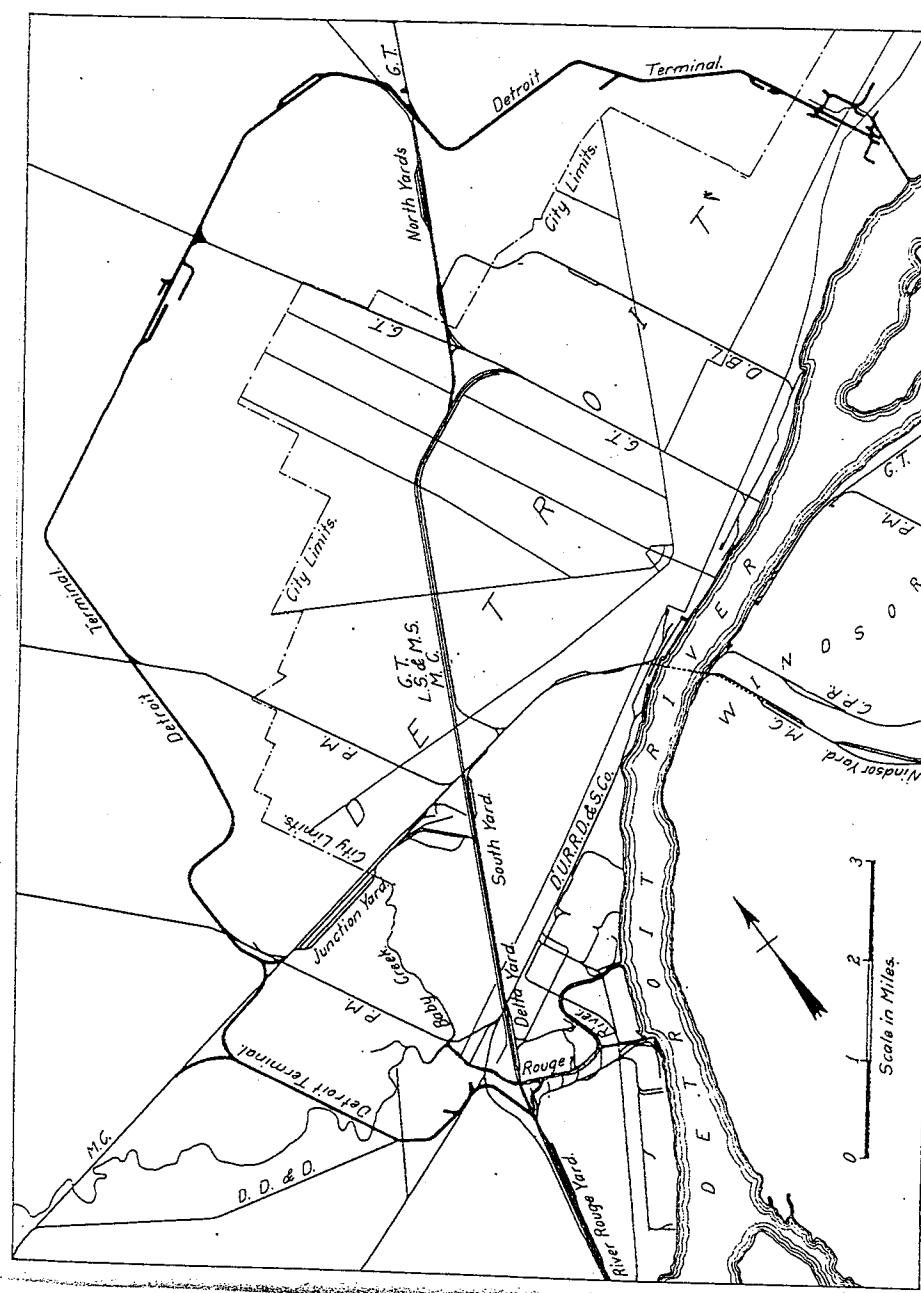


The first train leaving Muskegon, Mich., inaugurate^s the double, daily passenger service between shores of Lake Michigan.
Trunk Western Lines traffic developments on the eastern shore of Lake Michigan.
Grand Rapids and Detroit, which



present, including the Chalmers Motor Co., the R. C. H. Corporation, the Hudson Motor Co., the Continental Motor Co., the Lozier Motor Co., the Ford Motor Co., all of which produce automobiles, and the Metal Products Co., the Welded Steel Barrel Co., the Anderson Forge & Machine Co., the Armstrong Tanning Co., the Glass Enamel Package Co., and the Detroit Cast Stone Block Co., producing miscellaneous products. The line also serves the Edison Illuminating Co., and about 50 other plants which do not produce business but are large receivers of coal, building supplies, etc.

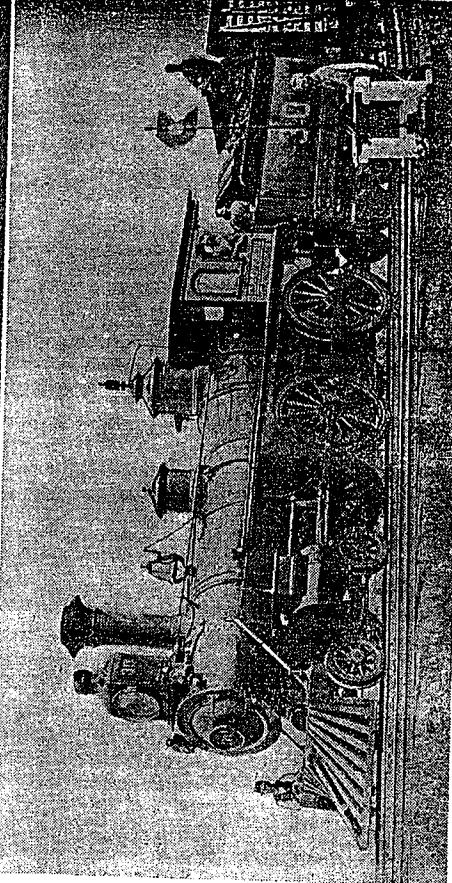
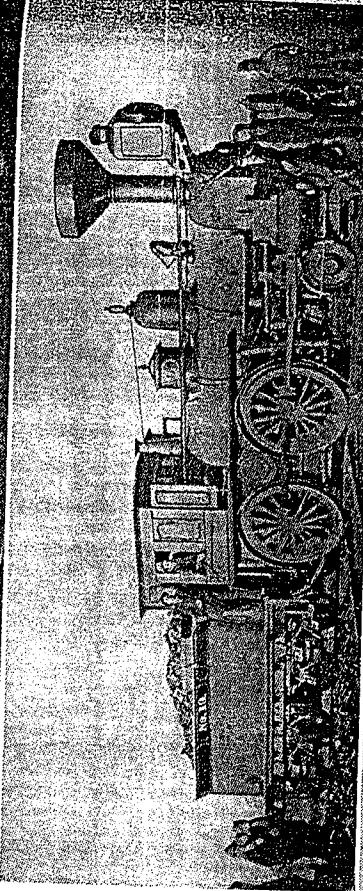
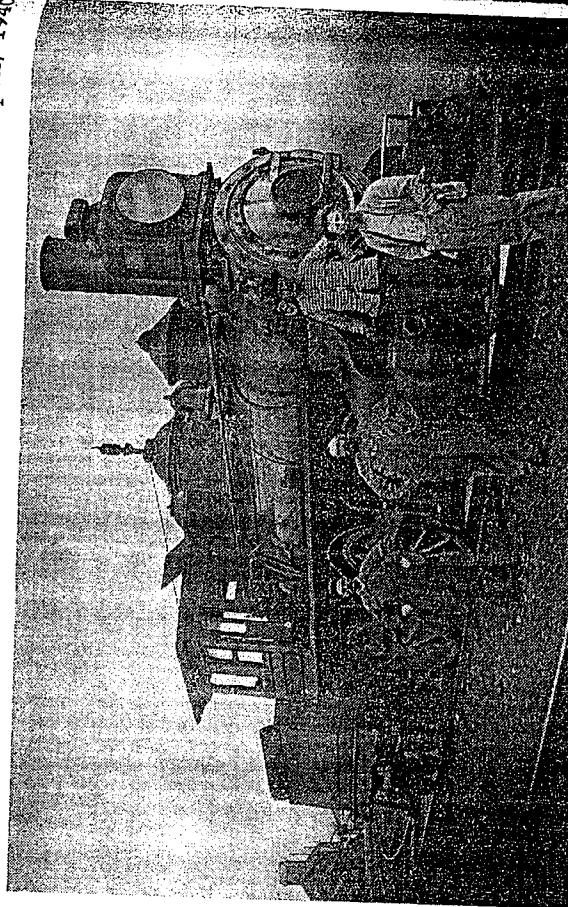
Every industry along the line is switched once a day and oftener if the amount of business warrants. In most cases an engine pulls the loaded cars from a number of industries in one drag to the classification yard at North Detroit and the distribution to the industries is made in a similar manner. For some of the larger plants, as the Ford Motor Co., or the Edison Illuminating Co., solid train load deliveries are made direct from the yard. The Ford company is one of the



Map of Detroit and Vicinity Showing Detroit Terminal Line and its Relation to Other Freight Lines

largest producers along the belt line, the maximum day's business at that plant being 176 car loads in 24 hours, representing 1,008 complete automobiles. This plant is served by six tracks with a capacity of 16 to 18 cars each and it is sometimes necessary to handle as high as 120 cars at this plant in one switch. In addition to the outbound loads, the Ford company also receives a large amount of material, running as high as 100 car loads per day.

While the industrial development along the belt line has barely begun and a comparatively small amount of the total business of the city is originated by the Detroit Terminal at present, the line serves other important functions in improving the freight terminal situation in the city. Although its



TOP: Locomotive No. 37 of the old Grand Trunk Railway. This interesting photograph is property of Engineer J. Halloran of Battle Creek, Mich., whose father, the late Tom Halloran, appears in the picture. MIDDLE: Locomotive No. 19 of the old Detroit, Grand Haven and Milwaukee Railroad (now part of Grand Trunk Western lines) photographed at Owosso Junction about 1930. In the cab window is the late Charles D. Brown who ran out of Detroit for many years, running several years ago and died in 1930. This engine had two bells, one of which was mounted on the buffer beam on the front of the engine. BOTTOM: Old Number 30 of the Chicago and Grand Trunk Railway about which little information is now available. Photographs loaned for reproduction by J. E. Donnelly, General Chairman, B. of L. E., Durand, Mich.