

INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT OF THE DIRECTOR

BUREAU OF SAFETY

ACCIDENT ON THE
GRAND TRUNK WESTERN RAILROAD

IONIA, MICH.

MAY 3, 1937

INVESTIGATION NO. 2172

SUMMARY

Inv-2172

Railroad:	Grand Trunk Western
Date:	May 3, 1937
Location:	Ionia, Mich
Kind of accident:	Derailment
Train involved:	Passenger
Train number:	19
Engine number:	5048
Consist:	3 cars
Speed:	50-65 m.p.h.
Track:	Tangent; slight descending grade
Weather:	Clear; temperature 75°
Time:	1:26 p.m.
Casualties:	1 killed 7 injured
Cause:	Kinked track

Inv-2172

June 12, 1937

To the Commission:

On May 3, 1937, there was a derailment of a passenger train on the Grand Trunk Western Railroad near Ionia, Mich., which resulted in the injury of two passengers, three persons carried under contract and three employees, one of whom subsequently died.

Location and method of operation

This accident occurred on that part of the Grand Rapids Subdivision of the Detroit Division extending between Durand and Grand Haven, Mich., a distance of 121.33 miles; this is a single-track line over which trains are operated by timetable and train orders, no form of block-signal system being in use. The accident occurred at a point 2.65 miles east of Ionia; approaching this point from the east the track is tangent for a distance of 2,409 feet, followed by a 0°30' curve to the left 3,613 feet in length and then tangent track for a distance of 1,857 feet, the accident occurring on this latter tangent at a point 422 feet from its eastern end. The grade for westbound trains is slightly descending, being 0.01 percent at the point of accident.

In the vicinity of the point of accident the track is laid with 90-pound 35 to 39 foot rails, rolled and laid in 1927, with 21 to 24 creosoted hardwood ties to the rail length, single-spiked, fully tieplated, equipped with rail anchors, and ballasted with washed gravel to a depth of 6 inches below the ties; it is well maintained. The track is laid on a fill varying from 2 to 7½ feet in height, being approximately 5 feet at the point of accident. The maximum authorized speed for passenger trains is 60 miles per hour.

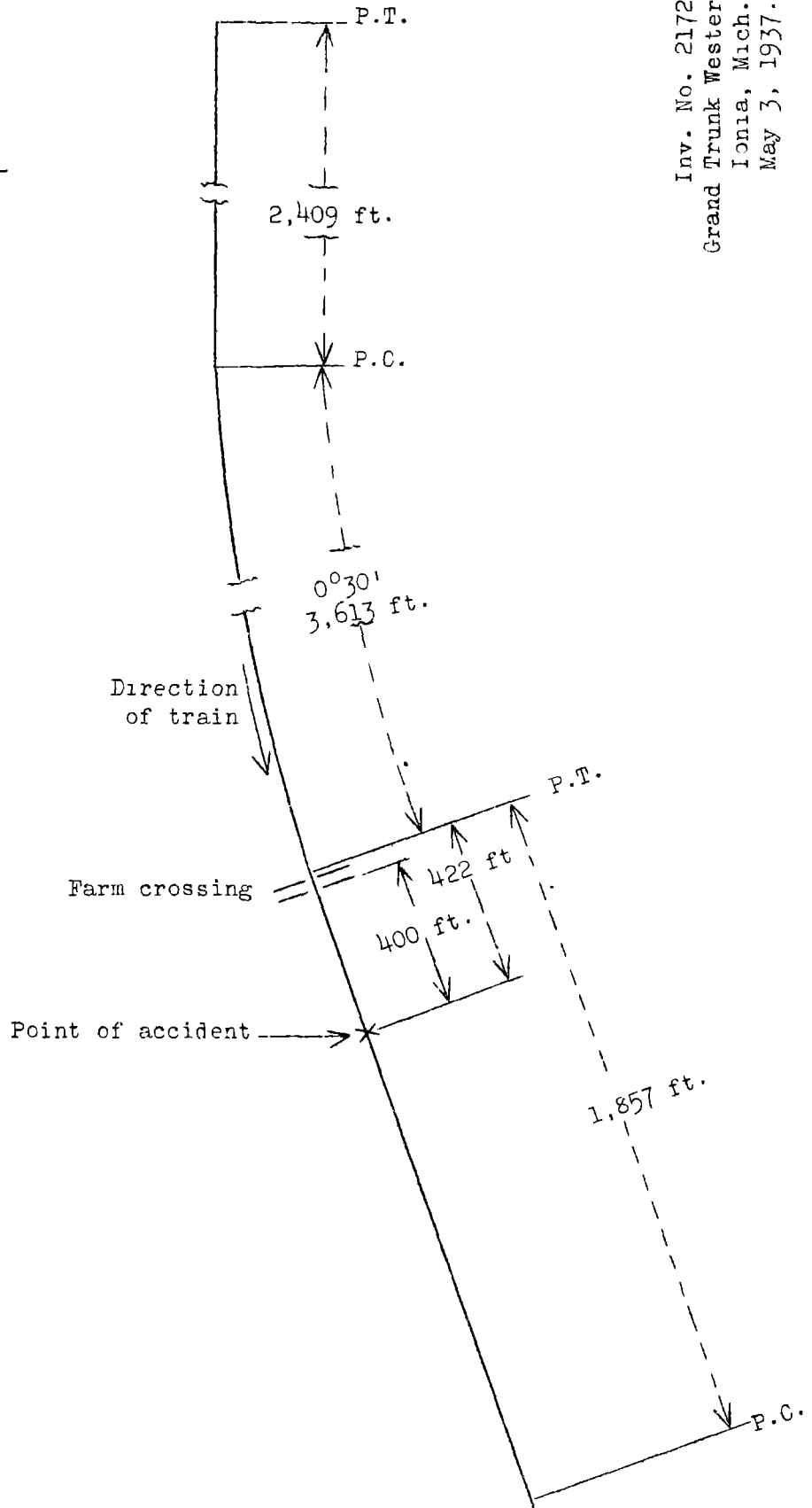
The weather was clear at the time of the accident, which occurred at 1:26 p.m.

Description

Train No. 19, a west-bound passenger train, consisted of 1 combination mail and express car, 1 baggage car, and 1 coach, hauled by engine 5048, and was in charge of Conductor Houghton and Engineman Brophy. The first car was of all-steel construction and the other two cars were steel sheathed with steel un-

Inv. No. 2172
Grand Trunk Western R.R.
Ionia, Mich.
May 3, 1937.

o	Durand, Mich.
	50.76 mi.
o	Muir
	3.78 mi.
X	Point of accident
	2.65 mi.
o	Ionia
	64.14 mi.
o	Grand Haven, Mich.



derframes. This train departed from Durand, 57.19 miles from Ionia, at 12:05 p.m., according to the train sheet, on time, and left Muir, 6.43 miles from Ionia, at 1:21 p.m., one minute late, and on approaching Ionia was derailed while traveling at a speed estimated to have been between 50 and 65 miles per hour.

The engine, tender and first car were derailed to the right and stopped on their right sides down the embankment, the engine being about 180 feet beyond the initial point of derailment with its front end near the north rail and the cab approximately 25 feet from the track. The tender was at right angles to the engine and the first car. The second car was derailed to the right at an angle of about 30° to the track, but remained upright; the right wheels of the front truck of the third car were derailed. The engine and first two cars were badly damaged. The employees injured were the engineman, fireman and baggageman, the engineman fatally.

Summary of evidence

Fireman Hall stated that the air brakes were tested at Detroit, their initial terminal, a running test was made on leaving that station, and the brakes worked satisfactorily en route. As the train rounded the curve east of the point of accident he was on his seatbox when he saw a flagman possibly 300 or 400 feet ahead and at the same time he saw men standing in the vicinity of a farm crossing violently waving their hats. He warned the engineman who immediately closed the throttle, applied the air brakes in emergency and acknowledged the stop signals about the time the engine passed the flagman. Fireman Hall then saw that the track ahead was kinked in the shape of a letter "S", and he jumped off. He thought that his engine was less than 1/2 mile from the point of accident when the flagman was first seen and that the farm crossing where the men were standing was located 400 feet from the point of accident. He estimated the speed of the train to have been between 50 and 60 miles per hour when the emergency application was made and thought that it had been reduced about 10 miles per hour at the time of the accident. After the accident he talked with Engineman Brophy who said that he had seen the flagman but that he was not back far enough.

Conductor Houghton stated that the first he knew of anything wrong was when the air brakes were applied in emergency, followed in a few seconds by the accident. Flagman Cooper stated that the train stopped at a point about its own length west of the farm crossing and he immediately went back to flag and met a section foreman with a red flag about a city block east of the farm crossing. The section foreman told him that the track had gone out. Baggageman Williams stated that after

leaving Muir he went into the baggage car and shortly thereafter he heard two blasts of the whistle in answer to a signal, followed almost immediately by the emergency application of the brakes.

Section Foreman Trusock stated that his section extends from mile post 120 to mile post 126, the accident occurring approximately at mile post 121.5. He had been working on the track for the past week and on the day of the accident he left Ionia on a motor car at 7:30 a.m. taking a load of ties to mile post 121.5; he then covered the balance of his section and returned to mile post 121.5 where he proceeded to install the ties until about 11:30 when he left for lunch, leaving a sufficient number of the new ties properly spiked to render the track safe for the passage of trains. The work of changing the ties made it necessary to lift the track only 7/8 inch and the track was surfaced at the same time, but he did not consider that any of the work being done at this point necessitated flag protection. On returning to work about 12:30 p.m. he started spiking and tamping the ties at the centers. Upon sighting along the track he noticed a slight kink of about one-fourth inch in one of the rails. He instructed the laborers to get their lining bars and straighten the rail. He was standing about 3 rail lengths east of the kink when the men started to straighten it and the track suddenly shot southward from 8 to 10 inches and then kinked northward, forming curves in the shape of a letter "S". He realized that Train No. 19 was soon due, and he grabbed a flag and started to run. He saw smoke around the curve about 1½ miles distant and could see the train when it was about 1 mile away and he continued running as fast as he could, waving the red flag as he advanced. He then stepped to the north side of the track to enable the engineman to see him more readily and as the engine passed him, the engineman leaned out of the cab window and answered his flag with two short blasts on the whistle. Section Foreman Trusock stated that he was about 1,445 feet east of the point of accident when the train passed him at a speed of 60 or 65 miles per hour, but he was unable to say whether the brakes were applied. He was of the opinion that the fireman could have seen him for a distance of about 1 mile, but due to the curve, the engineman's view would be limited to about one-fourth mile. Section Foreman Trusock had not experienced any trouble with the rails creeping, kinking or pulling apart due to weather conditions or other causes, and there was no doubt in his mind prior to the time that the track went out of line but that it was in condition for the safe passage of Train No. 19.

Observations made by the Commission's inspectors at the scene of the accident developed that with the flagman 1,445 feet from the point of accident he could have been seen for a

distance of 2,200 feet from the left side of the cab of a west-bound engine. The view from the right side was materially lessened on account of the curve.

According to a record obtained from the State Hospital at Ionia the temperature had risen from 60° at 9 a.m. to 75° at 1 p.m.

Discussion

The investigation developed that the track had been undergoing repairs for the past week; ties had been changed and track resurfaced and just prior to the accident the ties were being spiked and tamped at the centers. The section foreman then noticed a rail slightly out of alignment and instructed his men to straighten it, but while this was being attempted the track kinked southward 8 or 10 inches and then farther west it kinked northward. The section foreman immediately started out with a red flag to protect Train No. 19 and had reached a point about 1,445 feet east of the point of accident when the train passed him at a speed of about 60 miles per hour. The fireman of Train No. 19 saw the flagman when about 300 or 400 feet distant at which time he warned the engineman, who immediately applied the air brakes in emergency, but the distance was insufficient in which to stop the train before reaching the kinked track.

The temperature was not high on the day of the accident, having attained a maximum of only 75° at 1 p.m. and it cannot be stated definitely what caused the track to kink. It appears, however, that from some cause the rails were under a severe pressure and the work of changing the ties and resurfacing the track weakened the anchorage sufficiently so that when the men attempted to straighten the rail it resulted in the track buckling.

Conclusion

This accident was caused by kinked track.

Respectfully submitted,

W. J. PATTERSON,

Director.