Inv-2303

INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT OF THE DIRECTOR

BUREAU OF SAFETY

ACCIDENT ON THE

CHICAGO AND NORTHWESTERN RAILWAY

McHENRY, ILL.

OCTOBER 23, 1938

INVESTIGATION NO. 2303

SUMMARY

Inv-2303

Railroad:	Chicago and North Western
Date:	October 23, 1938
Location:	McHenry, Ill.
Kind of accident:	Derailment
Train involved:	Passenger
Train number:	770
Engine number:	1510
Consist:	3 cars
Speed:	25-50 m.p.h.
Operation:	Timetable, train orders and a manual block system.
Track:	Tangent
Weather:	Cloudy and dusk
Time:	5:19 p.m.
Casualties:	6 injured
Cause:	Open switch, apparently with malicious intent.

November 22, 1938.

To the Commission:

On October 23, 1938, there was a derailment of a passenger train on the Chicago & North Western Railway at McHenry, Ill., which resulted in the injury of six passengers. The investigation of this accident was made in conjunction with a representative of the Illinois Commerce Commission.

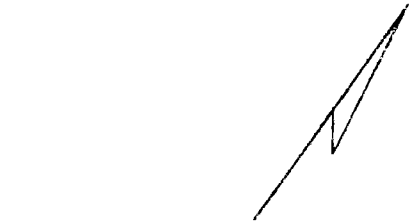
Location and method of operation

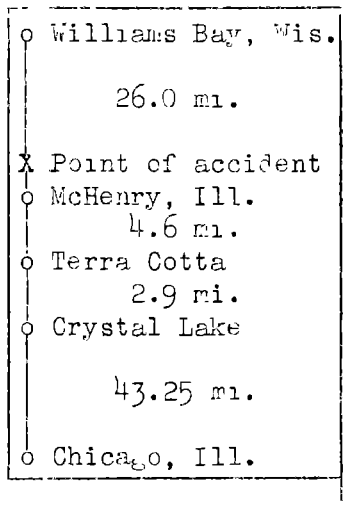
This accident occurred on the Galena Division, on that part of Sub-Division 4 which extends between Williams Bay, Wis., and Crystal Lake, Ill., a distance of 33.5 miles. This is a single-track line over which trains are operated by timetable, train orders and a manual block system. The accident occurred on a siding at a point 217 feet east of the west switch, which is located 1,646 feet west of the station at McHenry. Approaching from the west the track is tangent more than 1 mile to the switch and a distance of 1,518 feet beyond. The grade is undulating and at the point of accident is 0.195 percent ascending for east-bound trains.

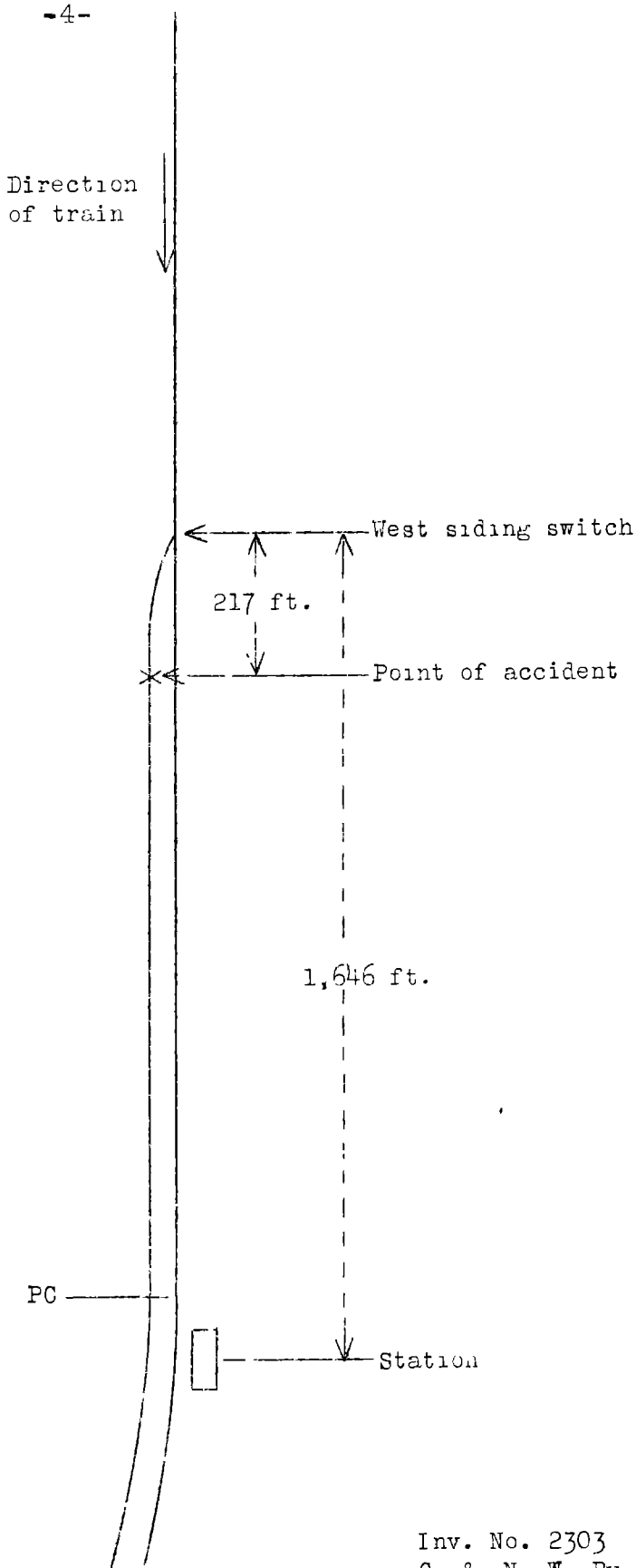
The switch involved is a facing-point switch for east-bound trains, with a No. 10 turnout having a maximum superelevation of one-half inch, and leads off the main track to the right to a siding which parallels the main track on the south and is 2,118 feet in length. The switch stand, located on the right side of the track, is of the P. & M. Star No. 6 type, and is equipped with a square target, 14 by 14 inches, placed at angles on the mast, presenting a diamond-shaped appearance, with its center 3 feet 8 inches above the headblock. The target is painted white, with a red center 9 inches in diameter, and is displayed only when the switch is lined for a movement to the siding. The switch stand is not equipped with a switch lamp. Switch lights are maintained between Crystal Lake and Williams Bay except at McHenry and Terra Cotta.

The main track and 111 feet of the turnout are constructed of 90-pound rail; the following 107 feet of the siding consist of 72-pound rail, and the next 352 feet, of 62-pound rail. The main track is single-spiked, fully tie-plated, ballasted with gravel to a depth of 12 inches and is well maintained.

The maximum authorized speed for passenger trains is 60 miles per hour.







Inv. No. 2303
C. & N. W. Ry.
McHenry, Ill.
Oct. 23, 1938

It was cloudy and dusk at the time of the accident, which occurred about 5:19 p. m.

Description

No. 770, an east-bound passenger train, consisted of two coaches and one combination baggage-passenger car, in the order named, of all-steel construction, hauled by engine 1510, of the 4-6-2 type, and was in charge of Conductor Maroney and Engineman Clarkson. This train departed from Williams Bay, 26 miles west of McHenry, at 4:40 p.m., according to the train sheet, on time, left Lake Geneva, 5.8 miles beyond, at 4:52 p.m., 2 minutes late, and was derailed after entering the open switch leading to the siding at McHenry while traveling at a speed variously estimated to have been between 25 and 50 miles per hour.

The entire train was derailed. The engine and tender frame stopped in an upright position on the road-bed to the right of and in general line with the track, with the front end of the engine 350 feet beyond the point of derailment. The tender trucks and cistern were torn from the tender frame, the cistern stopping on its right side 15 feet from the track. The first car leaned to the left at an angle of about 45°, with its front end to the right of the siding and its rear end on the track. The last two cars remained in general line with the track.

Summary of evidence

Engineman Clarkson stated that the air brakes were tested at Williams Bay, a running test was made on leaving that point and the brakes functioned properly en route. He turned the headlight on bright when entering Richmond, 9.8 miles west of McHenry, and was operating his train at a speed of about 60 miles per hour when approaching McHenry. At a point about 15 or 20 car lengths from the west siding switch he closed the throttle, opened the sanders and made a 15-pound brake-pipe reduction and had reduced the speed to about 50 miles per hour when reaching the switch. As the engine was about to pass the switch he saw that it was open and he applied the brakes in emergency, the accident occurring at 5:18:30 p. m. After stopping he immediately went back to the switch, found it lined for the siding with the target displayed, and the switch points in good condition. He examined the lock which was in the hasp and locked, and he was unable to open it by pulling on it. There were indications, however, that the lock

had been pounded. There was no one at or near the switch when he reached it. The visibility was poor as it was cloudy and dusk, but he thought that if it had been dark he would have seen the target by the headlight. Engineman Clarkson further stated that he had operated No. 763, west-bound, over this track about 9:42 a. m. on the day of the accident, and at that time the switches were in normal position. That was the last train to pass over this track prior to the accident.

Fireman Weinand stated that he was on his seatbox looking ahead when approaching McHenry. It was getting dark and he was unable to tell whether the headlight was burning brightly or dimly. He did not see the indication of the west switch stand and the first knowledge he had of anything wrong was when the engine gave a sudden lurch as it entered the siding, at which time he thought the speed was about 40 or 45 miles per hour. He thought that in daylight with the sun shining the switch target could be seen at a distance of about one-quarter mile, and that if the switch stand had been equipped with a switch light it could have been seen at the time of the accident approximately the same distance.

Conductor Maroney estimated the speed to have been about 45 miles per hour as the train lurched and entered the siding; he felt the air brakes being applied in emergency and thought that the speed had been reduced to about 25 miles per hour when the cars became derailed.

Head Brakeman Fick stated that there was a light mist at the time of the accident, and after the accident it was necessary to use a lantern.

Flagman Lumpp estimated the speed of his train to have been about 50 miles per hour when he felt the first application of the air brakes, and about 40 miles per hour when the emergency application was made. A drizzling rain had started at the time of the accident; it was dark and the visibility was not very good.

Section Foreman Antholz stated that he arrived at the scene of accident about 5:35 p. m., at which time it was dark but it was not raining, and he could see the switch target when about 150 feet from it. He thought that he could have seen a switch light a distance of about one-quarter mile, and the outline of a man about 200 feet. He had last inspected this switch at 2:30 p. m., on the day prior to the accident, at which time the switch was in good condition and lined for the main line. He was of the opinion that the switch had been opened by some one with a switch key or the lock had been

tampered with and opened and the switch lined for the siding and then relocked. He stated that if the chain is held taut and the lock is struck just right the lock will spring open in most instances. There are three men in his crew and none of them has a switch key.

Section Laborer Patzke stated that he oiled the switch involved about 3 p. m., October 22, at which time the switch was in good condition and lined for the main track and locked.

The time of sunset at Chicago was 4:57 p. m. on the day of the accident; McHenry is located about 35 miles west of Chicago.

Subsequent to this accident switch lamps were placed in service at McHenry and Terra Cotta on October 25, according to a statement of officials of this railway.

Observations of Commission's Inspectors

Inspection of the track disclosed a flange mark on the top of the left rail of the siding 198 feet from the west switch; this mark extended westward a distance of approximately 8 feet. At a point 217 feet from the switch a flange mark about 7 inches in length appeared on the inside base of the south or right rail. The track was then torn out a distance of 350 feet to the point where the engine stopped.

The switch points, guard rail and frog were not damaged; the switch stand and its appurtenances were in good condition.

Discussion

After the accident the switch was found to be lined for the siding and locked, and the switch points, switch stand and appurtenances were in good condition, with the exception of the lock which appeared to have been pounded. It was not ascertained at the time of this investigation by whom the switch had been opened, but it appears that it was done with malicious intent. The last train movement over this track prior to the accident had been made about 9:42 a.m. when No. 763 passed; this train was manned by the same crew as that of No. 770, and the switch at that time was in proper position.

The evidence indicates that the train entered the No. 10 turnout at a speed of 40 or 50 miles per hour, and the derailment was caused by the excessive speed at which the train

entered the turnout. At the time of the accident the sky was overcast, it was dusk and night signals were more plainly visible than day signals. The engineman stated that he did not see the open switch until he had practically reached it, at which time he applied the air brakes in emergency but it was too late to reduce the speed sufficiently to avert the accident. Had this switch stand been equipped with a light, the engineman no doubt would have seen the indication at a greater distance and perhaps in time to avert the accident. On October 25, two days after the occurrence of the accident, lights were installed on the switch stands at McHenry and Terra Cotta.

Conclusion

This accident was caused by an open switch, apparently due to malicious tampering.

Respectfully submitted,

W. J. PATTERSON

Director