

INTERSTATE COMMERCE COMMISSION
WASHINGTON

REPORT OF THE DIRECTOR
BUREAU OF SAFETY

ACCIDENT ON THE
NEW YORK CENTRAL RAILROAD

ADAMS, N. Y.

SEPTEMBER 23, 1938

INVESTIGATION NO. 2296

SUMMARY

Inv-2296

Railroad: New York Central
Date: September 23, 1938
Location: Adams, N. Y.
Kind of accident: Derailment
Train involved: Passenger
Train number: 8
Engine number: 4607
Consist: 7 cars
Speed: 57 m.p.h.
Operation: Timetable, train orders and manual
block-signal system
Track: Single; 1° curve; vertical curve
Weather: Cloudy and dark
Time: 6:34 p.m.
Casualties: 2 killed, 2 injured
Cause: Open switch; tampered with by boys.

October 29, 1938.

To the Commission:

On September 23, 1938, there was a derailment of a passenger train on the New York Central Railroad near Adams, N. Y., which resulted in the death of two employees and the injury of one express messenger and one employee.

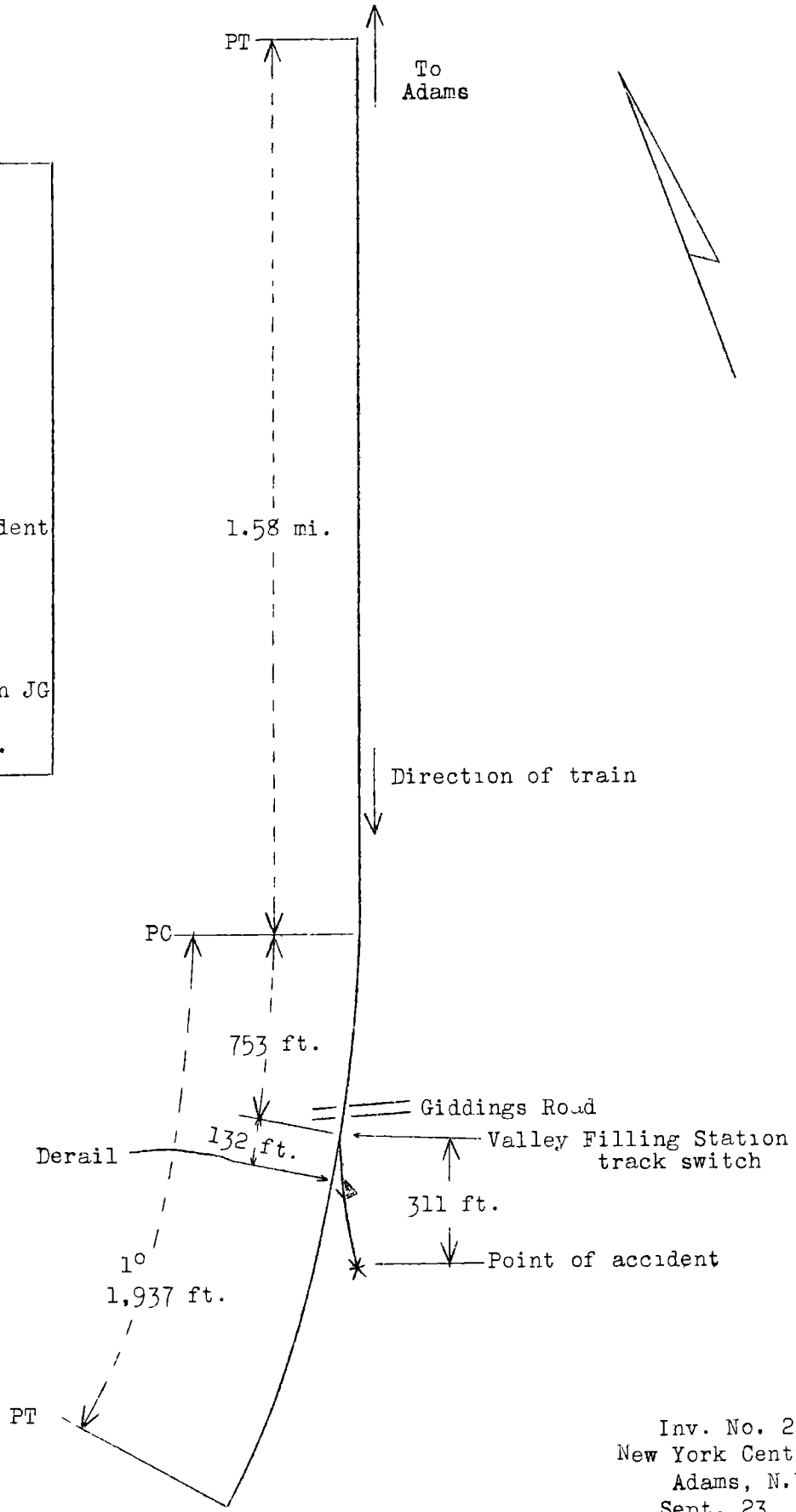
Location and method of operation

This accident occurred on that part of the St. Lawrence Division which extends between Massena and Signal Station JG, Syracuse, N. Y., a distance of 158.89 miles. In the vicinity of the point of accident this is a single-track line over which trains are operated by timetable, train orders and a manual block-signal system. The accident occurred at the stub end of an industrial track known as the Valley Filling Station track, the switch to which is located 2.49 miles west of Adams. Approaching this point from the east the track is tangent for a distance of 1.58 miles, followed by a 1°00' curve to the right 1,937 feet in length; the Valley Filling Station switch is located on this curve at a point 753 feet from its eastern end. The grade for west-bound trains is 0.5 percent descending for more than 1 mile, followed by a vertical curve extending a distance of 2,400 feet on which is located the switch at a point 173 feet from its eastern end.

The Valley Filling Station track is provided with a facing-point switch for west-bound trains, with a No. 10 turnout, and leads off the main track to the left, the track being 311 feet in length. The switch stand, located on the left side of the track, is of the New Century intermediate type, model 51-B, and is equipped with an oil-burning lamp and two targets. The center of the lens of the switch lamp is located 9 feet 7-7/8 inches above the head-block. A green aspect is displayed when the switch is lined for the main track and a red aspect, when lined for the industrial track. The targets are located below the lamp and display corresponding aspects.

The main track consists of 105-pound rail, 39 feet in length, on 24 yellow pine, oak and hardwood treated ties to the rail length; it is double spiked, fully tie-plated, ballasted with limestone to a depth of 8 inches under the ties and is well maintained. The industrial track is laid on a fill which is approximately 20 feet in height at the stub end where there is a pile of stone screenings and gravel; it is equipped with a No. 6 Hayes derail located on the south rail at a point 152 feet from the switch point.

o	Massena, N.Y.
	87.79 mi.
o	Watertown
	13.77 mi.
o	Adams
	2.49 mi.
X	Point of accident
	54.84 mi.
o	Signal Station JG
	5.48 mi.
o	Syracuse, N.Y.



Inv. No. 2296
 New York Central RR
 Adams, N.Y.
 Sept. 23, 1938

Giddings Road crosses the main track at grade 38 feet east of the industrial track switch.

In the vicinity of the point of accident the maximum authorized speed for passenger trains is 55 miles per hour.

It was dark and cloudy at the time of the accident, which occurred about 6:34 p.m.

Description

No. 8, a west-bound passenger train, consisted of one milk car, two baggage cars, one baggage and mail car, one baggage car, one coach, and one Pullman sleeping car, in the order named, hauled by engine 4697, of the 4-6-2 type, and was in charge of Conductor Grant and Engineman Slover. The cars were of all-steel construction, except the first and third cars which were of steel under-frame construction. This train departed from Watertown, 13.77 miles east of Adams, at 5:58 p.m., according to the train sheet, 8 minutes late, left Adams, the last open block station, at 6:28 p.m., 7 minutes late, entered an open switch leading to the Valley Filling Station track, struck the derail and pushed it from its fastenings without derailling any of the equipment, and continued to the end of the track where it was derailed; shortly before the derailment the train was traveling at a speed of 57.5 miles per hour according to the speed-recorder tape with which the engine was equipped.

The engine stopped 156 feet beyond the end of the spur track, badly damaged and leaning toward the left at an angle of 45 degrees. The tender frame remained coupled to the engine, but the cistern was torn from the frame and was tipped toward the left. The first three cars stopped in various positions behind the engine and were so badly damaged that they were later destroyed. The fourth car stopped with its front end headed down the fill at the end of the track, with the front truck torn off but the rear truck remained on the rails. None of the remaining equipment was derailed or damaged. The employees killed were the engineman and the fireman, and the employee injured was the flagman.

Summary of evidence

Conductor Grant stated that at Watertown, where two cars were added to the train, the air brakes were tested; on leaving that point a running test was made and the brakes functioned properly. After leaving Adams he was on the right side in the sixth car, the speed was between 50 and 55 miles per hour and on approaching the highway crossing near the Valley Filling Station switch he heard the engine whistle being sounded, but he did not

think that the whistle signal had been completed when the air brakes were applied in emergency. He thought the train was 250 or 300 feet from the crossing at the time the brakes were applied and his first thought was that probably an automobile had become stalled on the track. On looking through the window he did not see an automobile and he started to cross over to the left side of the train when the accident occurred. He estimated the speed to have been reduced to about 30 miles per hour when the engine became derailed. After the accident he examined the switch, found it lined for the spur track and the lever latched. The switch lock, which was battered and had been broken from the chain, was lying on the ground between the ties near the stand. The switch light was not burning and he observed that the red lens which faced his train was broken.

Head Brakeman Peterson and Flagman Hall estimated the speed of their train to have been between 50 and 55 miles per hour when the air brakes were applied in emergency and thought the speed had been reduced to 20 or 25 miles per hour at the time of derailment.

Section Foreman Tanner, in charge of the section on which the accident occurred, stated that on his arrival at the scene he found the switch open and latched and two lenses of the switch lamp broken. He had last been over the track on September 22.

Section Foreman Hughes, of an adjoining section, arrived at the scene about 7 p.m. and found a tie-plate with freshly battered marks on its edge lying near the switch-tie. The switch was in good condition, with the exception of the lamp and the lock.

Section Foreman Palloni stated that during his patrol on the day of the accident he stopped at the Valley Filling Station track switch between 1:25 and 1:30 p.m. The switch was easy to throw, in good operative condition, properly locked and the switch light was burning.

Division Engineer Barker and Trainmaster Walrath were of the opinion that the switch lamp when lighted could be seen by the engineman of an approaching west-bound train for a distance of three-fourths mile. Division Engineer Barker further stated that he noted that the derail had been torn from its fastenings, but there was no damage to the track; the switch points fitted tightly

Terminal Foreman Ringland, of the Motive Power Department, stated that inspection of the engine showed the throttle lever in closed position and bent against the boiler head. The brake valves were broken and it could not be determined whether the brakes had been applied. The reverse lever was in forward position, about one-fourth inch ahead of center.

Superintendent Hamler stated that the speed-recorder tape with which engine 4697 was equipped indicates that the train started from a stop at Adams Station and gradually increased the speed from zero to approximately 57.5 miles per hour and at a point 2.5 miles from Adams the record stops abruptly and drops to zero, indicating that the train had attained a speed of approximately 57.5 miles per hour at the time of the accident.

Kenneth S. Beach, 13 years of age, and his brother, William Beach, 10 years of age, stated that they live near the Valley Filling Station track. On the day of the accident they were delivering papers on their bicycles and when they came to the road crossing located just east of the switch they stopped and started to throw stones at the switch light. Kenneth broke the red lens and William climbed up the switch stand and threw more stones and broke the green lens, following which the light went out. They then delivered a paper to a residence located across the tracks, and on returning to the crossing they again started to tamper with the switch. William picked up a tie-plate lying nearby and pounded the switch-lock several times but was unable to break it. Kenneth then took the tie-plate and after striking the lock several times it sprung open following which he stepped on the switch pedal and the lever went over to the opposite side. In later statements, however, both boys stated that Kenneth threw the switch himself. They both attempted to throw it back to its former position but were unable to do so; they returned to their home and about 5 or 10 minutes later they heard the crash of the derailment. Their reason for tampering with the switch was that they wanted to see if they could operate it. They both stated that they realized a serious accident might result if a train entered the switch from the east. They were afraid to tell their parents what they had done. They said they had never tampered with a switch before; Kenneth had observed trainmen operating the switch, and they both had operated the derail on one occasion when railroad men were there.

Observations of Commission's Inspectors

The Commission's inspectors, in conjunction with officials of the railroad, made a test at 6:40 p.m., September 26, with the same type of engine as engine 4697 to determine the distance the switch target involved could be seen from an approaching west-bound train. The weather conditions and visibility were substantially the same as on the evening the accident occurred. The switch lamp was extinguished and the switch lined for movement to the industrial track. Approaching the switch at a very low rate of speed, with the headlight burning brightly, and looking from the engineman's seat, the red target could first be seen at a point 449 feet distant.

Discussion

After the accident the switch was found lined for the industrial track and latched; both the red and the green lenses were broken and the lamp was not burning. This switch had been tampered with by two boys, 13 and 10 years of age, who live nearby. They had broken the lenses, following which the light went out, and then with a tie-plate they pounded the switch-lock until it sprang open and one of the boys threw the switch. They were unable to throw it back to its former position, following which they went home and about 5 or 10 minutes later the accident occurred. They gave as their reason for tampering with the switch that they wanted to see if they could operate it.

A test conducted after the accident indicated that with the switch lined for the industrial track and the lamp extinguished, the red target could be seen by the engineer of a west-bound train traveling at a low rate of speed when 449 feet distant; the evidence was to the effect that if the switch lamp had been lighted it could have been seen about $\frac{3}{4}$ mile. The train was traveling at a speed of 57 miles per hour as it approached this switch, and according to the statements of the surviving members of the crew the brakes were applied in emergency prior to the accident, the conductor stating that he thought they were applied when the engine was between 250 and 300 feet from the road crossing located just east of the switch. They estimated the speed to have been reduced to between 20 and 30 miles per hour at the time the train became derailed. The speed-recorder tape, however, showed an abrupt drop from a speed of 57.5 miles per hour to zero and the position of the wreckage indicates that the speed had not been materially reduced at the time of derailment.

Conclusion

This accident was caused by a switch having been tampered with and left open by two boys.

Respectfully submitted,

W. J. PATTERSON,

Director.