

COMMISSIONER *Meyer*

DATED *Nov. 18/19*

441

IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE
ERIE RAILROAD, AT BELMONT, N. Y.,
OCTOBER 10, 1919.

November 14, 1919.

On October 10, 1919, there was a derailment of an express train on the Erie Railroad at Belmont, N. Y., which resulted in the death of two employees. This accident was investigated jointly with the Public Service Commission of the State of New York, and as a result of this investigation the Chief of the Bureau of Safety reports as follows:

The Allegheny Division of the Erie Railroad extends between Hornell, N. Y., and Dunkirk, N. Y., a distance of 128.1 miles, in a general direction of east and west. From WA Tower, near Hornell, to Cuba Junction, a distance of 45.8 miles, it is a single track line, over which trains are operated by time table, train orders and a manual block signal system.

The accident occurred at what is known as "PE" Siding, which is the eastern end of a 70-car passing siding at Belmont, 33.9 miles west of Hornell and .6 miles east of Belmont. This siding is on the right of the main track, approaching from the east. The track approaching "PE" siding is tangent for a distance of approximately $3\frac{1}{2}$ miles. The grade is .3% descending for about 4,170 feet, level for 3,892 feet, and then there is 5,560 feet of .45% descending grade to the point of accident.

The switch at "PE" Siding is a No. 10 switch, with a No. 31 rigid Ramapo switch stand, located on the north side of the track. The center line of the target is about 6 feet

above the top of the rails, while the switch lamp is about 7 feet, 9 inches, above the top of the rails. Day indications are a white target for main track and a red target for passing track, the respective night indications being green and red lights. From trains approaching from the east the outline of the switch target can be seen for a distance of $1\frac{1}{2}$ miles and the colors on the switch target can be distinguished at a distance of $\frac{1}{4}$ of a mile. The weather was cloudy, but not such as to interfere with visibility.

The train derailed was westbound express No. 9, consisting of engine 2568, 17 express cars and two cabooses, en route from New York to Chicago, in charge of Conductor Feeney and Engineman Hamilton. The train departed from Hornell at 7.38 a.m., 1 hour and 6 minutes late, passed Delo, the last open telegraph office, 3.9 miles east of "PE" Siding, at 8.35 a.m., 1 hour and 11 minutes late, and at about 8.40 a.m. was derailed by running into an open switch at the eastern end of "PE" Siding, the speed at the time of derailment being estimated to have been about 50 miles an hour.

The engine came to rest on its right side, the head end being about 400 feet west of the switch points and about 20 feet north of the center line of the main track. The tender came to rest on top of the engine cab. The first car in the train came to rest about 117 feet north of the center line of the main track, with the rear end about opposite the front end of the engine. The second, third and fourth cars were partly

overturned and partly telescoped; the fifth car was astride one of the main track rails, the sixth car lay diagonally across the main tracks, while the seventh car was on the south side of and parallel with the main track; these three cars were to the south of the main part of the train. The eighth, ninth and tenth cars were of wooden construction and were totally destroyed; they were also the only wooden cars that were derailed, all other derailed cars having steel underframes. The eleventh and twelfth cars were partly overturned and telescoped. The thirteenth car came to rest with the forward truck derailed, the rear truck remaining on the rails of the passing track. The fourteenth car came to rest with its forward truck on the passing track and the rear truck on the main track. The balance of the train was not derailed or damaged. The employees killed were the engineman and fireman.

Conductor Feeney stated that before departing from Hornell, at 7.36 a.m., Engineman Hamilton appeared to him to be in good physical condition. Only one stop was made after leaving Hornell, which was at Taylor Street subway, at which time the brakes worked all right. The brakes were applied and the speed reduced at two points before the derailment occurred, once when a running test was made between Tip Top and Andover, and again approaching Wellsville. He heard the engineman sound a road crossing whistle when about 1 mile west of Scio. At the time of the accident he was riding in the 17th car. He felt a jar as though the engine had broken off and the air had

set, followed immediately by an irregular motion of the train until it came to a stop. He looked at his watch as he descended to the ground and it was then 8.42 a.m. He estimated the speed at the time of derailment to have been about 50 miles an hour. Upon going forward the brakeman called his attention to the switch, which he examined and found lined up for the siding; the switch target showed red. He thought the switch target must have been visible nearly half a mile distant. About an hour and 10 minutes after the derailment he noticed that the throttle on the engine was closed and the brake valve in the emergency position.

Flagman Orr stated that as they were leaving Hernell he looked at the air pressure gauge and it indicated about 110 pounds. The brakes appeared to operate normally when they stopped at Taylor Street subway and just before descending the grade west of Tip Top. He was riding in the 17th car when he felt what seemed to be an emergency application of the brakes, followed in three or four seconds by a severe shock. He got out on the ground and from where he was standing, saw the switch target showing red. His recollection was that the accident occurred at 8.40 a.m.

Brakeman Stephens stated that he was riding in the cupola of the rear caboose when he felt two distinct shocks. When he felt the first shock he looked at the air gauge and it appeared to drop about 15 pounds; the next time it dropped to zero. He looked at his watch just after getting off the caboose and it was 8.42 a.m. He and the conductor had walked forward about a car

length when he noticed the switch target was red and called the conductor's attention to it. As soon as escaping steam permitted, he saw the throttle closed and the brake valve in the emergency position.

Express Messenger Coleman stated that he felt an emergency application of the brakes when about 1/8 of a mile east of the switch, there being an interval of but a few seconds before the shock of derailment. Express Messenger Feskett, riding in the 14th car, said the brake application was apparently made when the engine was about at the switch. Upon alighting from his car, which stopped directly at the switch, Messenger Feskett observed the switch set for the siding, with the switch points snugly up against the stock rail.

Car Inspector Ferrance stated that, assisted by Car Inspector Hall, he made a thorough inspection of the equipment and test of the air brakes on train No. 9 before it departed from McAnell, finding the equipment in first-class condition and the air brakes functioning properly.

Inspection of the locomotive made by General Foreman Hickey and Master Mechanic Norton after the accident showed the throttle closed, the brake valve in emergency position and the right injector turned on, indicating that Engineman Hamilton was not asleep or incapacitated and that, after realizing the situation he did all in his power to bring the train to a stop, while the testimony of the train crew and express messengers that Engineman Hamilton applied the air in emergency just before

passing the switch indicated that it was not until that time that he saw that the switch target was red and the switch set for the siding.

The track in the vicinity of the accident was in charge of section Foreman Smith. At about 8.15 a.m. the section gang, under the direction of Foreman Smith, took their hand-propelled car out of the tool-house, the car being loaded with the necessary tools. While no specific inquiries were made by any of the gang as to the whereabouts of train No. 9, none of the men having heard it pass, it was generally understood that the train had not, as yet, passed by. The hand-car was therefore shoved across the main track to the passing track, the entire gang boarded the car, and it was moved eastward as far as the derail at the east switch, a distance of one-half a mile. At this point Section Foreman Smith dismounted from the car, unlocked the switch and lined it for the passing track, so that his hand-car could proceed out on the main track. When the switch was thrown, the derail, being pipe-connected with the main track switch, dropped off the rail. This procedure was necessary on account of the hand-car being too heavily loaded to be lifted over the derail. Section Foreman Smith remained at the switch stand, where it was his intention to make certain repairs to the switch lamp. The section gang proceeded with the hand-car out onto the main track, and, after throwing off a few tools at a point between the derail and a farm crossing, located a distance of 60 feet east of the switch points,

continued with the car to the farm crossing, where, on account of the approach of train No. 9, they removed the hand-car to the south side of the track, one man remaining on the south side, the other three going to the north side of the track in the vicinity of the farm crossing. None of the men paid any attention to the position of the switch, presuming that Section Foreman Smith would attend to it, as had always been his custom. Some trouble had been experienced with the lamp on this switch and Section Foreman Smith had provided himself with a new burner and wick to replace the old burner in the lamp and as soon as he threw the switch for the hand-car to pass, he lifted the lamp from the mast and started to work at it. In the meantime, train No. 9 was approaching and, while the section gang had ample time to remove the hand-car from the main track, Section Foreman Smith's attention was taken up with repairs he was making to the switch lamp, and he moved back from the track when he saw train No. 9, at which time it was about 1,600 feet distant, forgetting that he had left the switch open. He had intended to close the switch as soon as he had fixed the lamp. He acknowledged that his first duty after the hand-car passed out onto the main line was to have closed the switch, but the fact that No. 9 had approached so closely to him without his seeing it, excited him so that he forgot to do so. He possessed a book of rules and a time-table, but had not been examined on them. He was thoroughly familiar with the rules governing the handling of switches, however, and had opened and closed this

switch on previous occasions for a similar purpose. He possessed the only switch key in the section gang and had not instructed nor permitted any of his men to manipulate the switches. It had been their practice, before starting out on a day's work to ascertain whether or not all overdue first-class trains had passed, although he admitted they sometimes were not so particular as to the passage of westbound trains because the track to the east was visible for so long a distance. He stated that the target on this switch was in good condition, although not freshly painted. In failing to close the switch immediately after the hand-car had passed through the switch, he admitted he failed to perform his duty properly and accepted full responsibility for the accident.

The direct cause of this accident was the failure of Section Foreman Smith to close the main track switch immediately after his hand-car had passed through it and before the approach of train No. 9. Contributing causes were the failure of Engineman Hamilton to observe the indication of the switch target in time to bring his train to a stop before it entered the switch, and the negligence of the four section men in not observing the open switch and reporting it to their foreman in time to avert the accident.

As stated before, the outline of the switch target could be seen for a distance of $1\frac{1}{2}$ miles, while the color of the target was visible $\frac{1}{4}$ of a mile. Had Engineman Hamilton been on the alert he would have observed the indication of the

open switch in ample time to have brought his train to a stop before it reached the switch.

Section Foreman Smith entered the service as a trackman in 1911 and was promoted to foreman in 1913. He resigned in 1917, again entered service as a trackman in 1919 and was promoted to foreman in the same year.

Engineman Hamilton was employed as a fireman in 1886 and promoted to engineman in 1890.

The engine crew of train No. 9 had been on duty 2 hours and 27 minutes after a period off duty of 35 hours and 20 minutes.

RWL