

June 20, 1924.

To the Commission:

On June 1, 1924, there was a derailment of a passenger train on the Tabash Railway at Williamsport, Indiana, the derailed train colliding with a freight train standing on a passing track, resulting in the death of 6 passengers, 6 employees off duty, and 1 employee on duty, and the injury of 44 passengers and 4 employees. The investigation of this accident was made in conjunction with representatives of the Public Service Commission of Indiana.

Location and method of operation.

This accident occurred on the Second District of the Peru Division, which in the vicinity of the point of accident is a single-track line over which trains are operated by time-table, train orders and an automatic block-signal system. The point of accident was at the west passing-track switch at Williamsport; approaching this point from the west there are about 4,000 feet of tangent, followed by a curve to the left of 1° which is about 2,300 feet in length, following which the track is tangent for some distance beyond the switch, which is 218 feet beyond the end of the curve. The grade is 0.819 per cent descending for some distance, followed by about 2,050 feet of 0.257 per cent descending grade to the point of accident. The last eastbound signal, No. 281.1, is located nearly 3,000 feet west of the west switch. The weather was slightly foggy at the time of the accident, which occurred at about 11.44 p.m.

Description.

Westbound freight train second No. 91 consisted of 59 cars and a caboose, hauled by engine 2210, and was in charge of Conductor Nelson and Engineman Bouchard. It arrived at Williamsport at 11.20 p. m., and was standing on the passing track at that point when it was struck by the derailed equipment of train No. 2.

Eastbound passenger train No. 2 consisted of one mail car, one express car, one combination car, one coach, one chair car, three sleeping cars, and one business car, hauled by engine 672, and was in charge of Conductor Martin

and Engineman Bickel. It left Danville, Ill., 21.9 miles from Williamsport, at 11.11 p. m., one minute late, and was derailed at Williamsport while traveling at a speed estimated to have been about 30 miles an hour.

Train No. 2 came to rest in three sections; the engine and first three cars composed the first section and stopped at a point about 3,000 feet beyond the switch, none of this equipment being derailed. The second section consisted of the coach and chair car, both of all-steel construction, and came to rest in an upright position 1,075 feet beyond the switch, the rear truck of the coach had been derailed at the switch causing the rear end of the car to swerve to the left and strike the side of engine 2210, while the chair car had its front end torn away on the left side. The third section was composed of the three sleeping cars, also of all-steel construction, and the business car, which was of steel-underframe construction; all of these cars were derailed but remained upright, the first two came to rest east of engine 2210 with their left sides considerably damaged, while the third sleeping car came to rest with its left side against engine 2210 and was also considerably damaged, while very slight damage was sustained by the business car. Most of the fatalities occurred in the third sleeping car, and were due to the steam entering the car as a result of the check valve and other parts having been torn from the side of engine 2210. None of the equipment in train second No. 91 was derailed, although engine 2210 was considerably damaged on its left side. The employee on duty killed was the engineman of train second No. 91.

Summary of evidence.

Immediately after the accident the passing-track switch was found to be in a badly damaged condition. The left switch point together with the adjoining rail was overturned, while the right switch point was bent as was the case with some of the tie bars. The switch was also unlocked with the lock on the ground near the head block tie about 2 or 3 feet from the base of the stand, the switch lever was also found to be out of its notch and moved part way around. The track was torn up for a distance of about 450 feet, beyond which point there were flange marks on the ties extending to where the coach and chair car came to rest. /

Engineman Bickel, of train No. 2, said clear indications were displayed by the automatic signals, that he was unable to see the indication of the switch lamp at the west switch from his side of the engine, and that he noticed

nothing wrong until the brakes were applied after the engine had passed the switch, at which time the speed was about 50 miles an hour. Engineman Bickel reached the switch about 20 minutes after the occurrence of the accident, examined it in company with Conductor Martin, and expressed the opinion that the accident was due to the lock not having been in place. Fireman Siplist said he was riding on the seat box approaching Williamsport, and that he saw the switch lamp at the west switch displaying a clear indication. His other statements brought out no facts in addition to those given by Engineman Bickel.

Conductor Martin, who was riding in the rear end of the second slowing car, said that on getting out of the car after the accident he saw the switch lamp displaying a stop indication. He went to the switch and had been there about two minutes when Head Brakeman Torrance of train second No. 91 came up with a lantern. Conductor Martin took the lantern, examined the switch, and found it to be damaged substantially as previously described. Conductor Martin said the switch lever had been moved about two-thirds of the way around, and that then he called the attention of Head Brakeman Torrance to the lock on the ground the latter replied that he had put it in the switch. Conductor Martin expressed the opinion that the switch had been closed but not locked. Flagman Vauk, of train No. 2, said he glanced at the switch on his way back to flag, and noticed that the points were open and the switch lever projecting horizontally from the stand; he did not notice any one in the vicinity of the switch. Other employees who examined the switch, found it open, and the lock on the ground, were Conductor Smith who was traveling on train No. 2, and also the conductor, head brakeman and rear brakeman of train second No. 91.

The crew of train second No. 91 held an order advising them that train No. 50, due to leave Williamsport at 11.21 p. m., would wait for them at Williamsport until 11.27 p. m. Train second No. 91 arrived at Williamsport at 11.20 p. m., but before it could get into clear train No. 50 arrived, was flagged, and pulled ahead between the switches. The passing track not being long enough for train second No. 91, it was necessary to head out on the main track at the west switch, after which the engine and four cars backed in on a track known as the back-track at the switch joining this track with the passing track, this being for the purpose of clearing the main track for train No. 2. As a matter of fact, however, the rear end of train second No. 91 was still fouling the main track, and it was necessary for engine 2210 to cut off from the four cars, couple to the balance of the train and pull it ahead until the caboose cleared the

main track, this being accomplished without the engine fouling the main track at the west switch. Conductor Nelson had arrived at the head end at about the time the engine was being coupled to the train, while Head Brakeman Torrance had gotten off the engine near the main track switch and had closed it, the enginemen and fireman coupling the engine to the train. Conductor Nelson saw the indication of the switch lamp change from red to white, and then went to a telephone near the west switch to communicate with the dispatcher and in passing Head Brakeman Torrance he asked the brakeman if he had locked the switch, to which question the head brakeman replied in the affirmative. On his return from the telephone Conductor Nelson noticed that the westbound automatic signal located near the west switch was displaying a clear indication. Shortly afterward Head Brakeman Torrance told him that there was a brake beam down on the first of the four cars which had been placed on the back track, the head brakeman saying this brake beam came down as the cars were passing over the frog of the back-track switch. Conductor Nelson went with the brakeman and they were engaged in removing this brake beam when train No. 2 was derailed. Conductor Nelson said he did not go to the passing-track switch until 8 or 10 minutes after the occurrence of the accident, at which time he found the conditions existing as previously mentioned and he said the switch did not have the appearance of having been locked.

Head Brakeman Torrance said he flagged train No. 50, and then handled the main-track switch, opening it for his train to head out on the main track and closing it after the engine had placed the four cars on the back track and returned to its train, although at that time he did not know that it would not be necessary for it again to pull out on the main track in order to enable the rear of the train to get into clear. Head Brakeman Torrance verified Conductor Nelson's question about having locked the switch, and also about his reply being in the affirmative, and he said that after the occurrence of the accident he did not go near the switch for about 1 hour and 30 minutes. When questioned in the presence of Conductor Martin, however, he recalled having gone to the switch within a very few minutes after the occurrence of the accident, and having given his lantern to Conductor Martin so that the latter could examine the switch. Head Brakeman Torrance said he did not at any time lay the lock down, and was positive that after closing the switch he had put the lock in the staple, although his statements indicate a doubt in his mind as to whether or not he afterwards snapped the lock. He admitted not having pulled on the lock to make sure it had snapped.

Fireman Hurtt, of train second No. 91, said he had noticed the clear indication of the switch lamp shortly before the arrival of train No. 2, while it was red after the accident; he also had noticed that the westbound automatic signal near the switch was displaying a clear indication shortly before train No. 2 arrived.

Inspection of the wheels under the rear truck of the coach before it was derailed showed that the gauge was correct, and that there was very little wear on either the flanges or the treads. The inspection of the switch stand, which is of the Elliott high-stand type, showed that the tie on which the stand was placed was not well bedded in the ballast, while at the end where the stand itself was located the tie rested on the ground. The switch stand was found to be so sensitive to vibration that when closed, with the lever securely down in the notch and without the lock being in place, it was only necessary to shake the stand a few times by hand to cause the lever to work out and permit the switch points to move partly open, while the tension was sufficient to throw the lever half way around after it came out of the notch. There was some wear, not excessive, on the sides of the notch, and this undoubtedly facilitated the tendency of the lever to fly out; examination of another switch stand of the same type showed that a similar tendency existed, although to a lesser degree.

Conclusions.

This accident was caused by the switch lever of the passing-track switch coming out of its notch and allowing the switch points to open as train No. 2 was passing over the switch.

The evidence indicates that when engine 2210 returned from the back track to the passing track for the purpose of pulling the balance of its train in to clear, Head Brakeman Torrance had gotten off at the main-track switch to close it, after which, in response to a question by Conductor Nelson, he indicated to the latter that he had locked the switch. That the switch points were closed until the arrival of train No. 2 is apparent from the fact that the fireman of each train saw the clear indication displayed by the switch lamp, while the automatic signals also were displaying clear indications. It is clear, however, that the switch was not locked, otherwise the points could not have opened under the train, and it seems apparent that Head Brakeman Torrance merely closed the switch, instead of locking it as required by the rules, and that the

vibration of the engine and first few cars of train No. 2 passing over it at a high rate of speed caused the lever to fly out of its notch, permitting the switch points to open and resulting in the derailment of the train.

Head Brakeman Torrance had been employed as a brakeman on this railway since January 27, 1924, previous to which he had had about two months' experience on the New York Central Lines, and about one year's experience on the Chesapeake & Ohio Railway. In the exception of the fireman of train second No. 91, all the other employees involved were experienced men. None of these employees had been on duty in violation of any of the provisions of the Hours of Service Law.

Respectfully,

W. P. BOPLAND.

Director.