

INTERSTATE COMMERCE COMMISSION.

REPORT OF THE CHIEF OF THE BUREAU OF SAFETY COVERING INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE NEW YORK, NEW HAVEN & HARTFORD RAILROAD NEAR EAST PORT CHESTER, CONN, ON JULY 31, 1919

OCTOBER 30, 1919

To the Commission

On July 31, 1919, there was a rear-end collision between two west-bound freight trains on the New York, New Haven & Hartford Railroad near East Port Chester, Conn, which resulted in the death of two employees and the injury of one employee. After investigation of this accident in which a representative of the Public Utilities Commission of the State of Connecticut also participated the Chief of the Bureau of Safety reports as follows:

That part of the New York division on which this accident occurred is a four-track electrified line extending between Devon Conn, and Woodlawn, N. Y., over which both electric and steam motive power is used. The general direction of the railroad is east and west. Beginning with the northernmost, the tracks are designated as Nos. 3, 1, 2, and 4, respectively, Nos. 3 and 1 being used for westbound and Nos. 2 and 4 for eastbound trains. Trains are operated by time-table, train orders, and an automatic block signal system. The signal system was put in service March 18, 1917, and consists of signals of the normal-clear left-hand upper-quadrant semaphore type, suspended from catenary bridges. The aspects and indications as displayed by the semaphore arms are horizontal for stop, diagonal for caution, and vertical for clear, the same indications being denoted by red, yellow, and green intensified electric lights both day and night.

The particular signals on track 1 referred to in this report are the two-blade interlocking home signal on bridge No. 248, located 775 feet east of East Port Chester tower, the two-blade permissive automatic signal No. 2701 on bridge No. 260, located 2,596 feet east of the interlocking home signal and commonly known as the rear home signal, and single-blade permissive automatic signal No. 2761 on bridge No. 272, located 3,600 feet east of the rear home signal.

Beginning at Greenwich tower No. 28 and approaching the point of accident the track is straight for 1,600 feet, followed by a $1^{\circ} 16'$ curve to the right 714 feet long, then a tangent 873 feet long fol-

lowed by a 2° curve to the right 829 feet long, then a tangent 1,305 feet long, followed by a 2° curve to the left 2,242 feet long, then a tangent 3,300 feet to the point of accident. The grade is 0.56 per cent ascending to a point about 1,000 feet east of the point of accident, then 0.56 per cent descending to the point of accident. It was daylight and the weather clear.

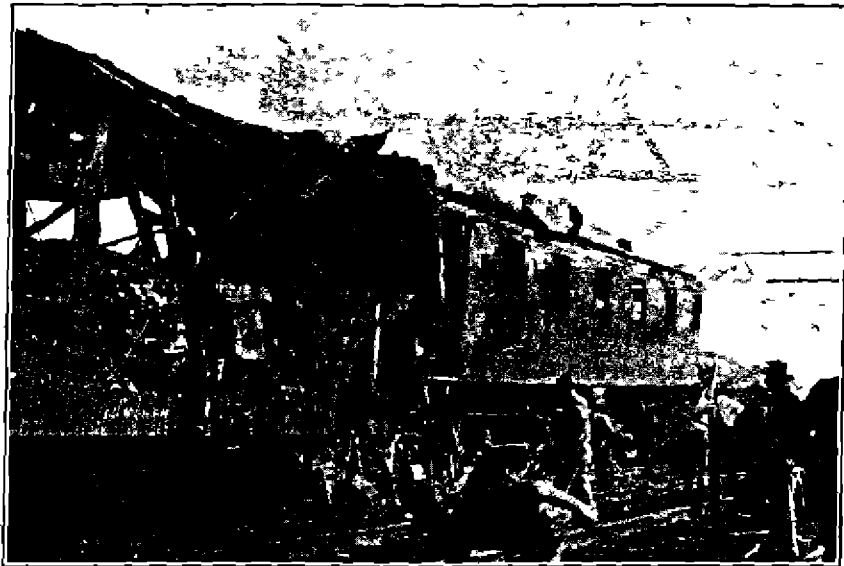
Extra 098, consisting of 62 cars and a caboose, hauled by motor 098, was in charge of Conductor White and Engineman Lacy, and was en route from Montowese, Conn., to Harlem River, N. Y. It arrived at Stamford at 3.20 a. m. and left at 5 a. m. on track 1. It passed Greenwich tower, the last open telegraph office east of the point of accident, at 5.20 a. m. passed signal No. 2761, which was displaying a caution indication, and made a stop at signal No. 2701, which displayed a stop indication. It then proceeded, picking up a flagman just west of the signal and stopping behind extra 1193 which was setting off two motors at East Port Chester, and the rear end of which was standing east of the interlocking home signal located on bridge 248. While extra 098 was standing at this point, with its rear end about 750 feet west of signal 2701, it was struck by train MH 3 at about 5.33 a. m.

Train MH 3, consisting of 48 cars and a caboose, hauled by steam locomotive 1312, in charge of Conductor Foley and Engineman Brickley, was dispatched from Midway, Conn. and was en route to Harlem River, N. Y. For operating reasons steam locomotive 1312 was cut off at New Haven and motor 0102 substituted. On account of Engineman Brickley not having qualified for service on a motor Engineman Rust was sent out with him from New Haven as an instructor. This train was stopped behind extra 098 at Stamford and left that point on track 1 at 5.10 a. m., passed Greenwich tower at 5.26 a. m., 6 minutes behind extra 098, after which it passed signal 2701 in the stop position, also passed the flagman of extra 098 just west of the signal, and while running at a speed of 18 or 20 miles per hour collided with the rear end of extra 098, about 750 feet west of signal 2701, demolishing the caboose of extra 098, the sills of which penetrated and crushed in the front end of motor 0102 instantly killing Engineman Rust and pinning Engineman Brickley under the controller box and débris, where he was burned to death by the débris catching fire before he could be extricated. The last three cars of extra 098—motor 0102, and the first and second, ninth, tenth and eleventh and eighteenth and nineteenth cars of train MH 3 were derailed, obstructing all four tracks. Five cars were destroyed and motor 0102 badly damaged by fire.

Illustration No. 1 is a view of the wreckage taken from the left side of the track, showing the caboose crushed between the motor and

the box car immediately ahead of it. Illustration No 2 is a view taken from the top of the cars composing the rear portion of train MH 3, and gives a general idea of the arrangement of the signals, power transmission wires etc.

Engineman Lacy, of extra 098, stated that signal 2761 displayed a caution indication and signal 2701 a stop indication. He brought his train to a stop at the latter signal, consuming about 2 minutes in releasing the air brakes and getting the train started again, picked up a flagman about 200 yards west of the signal and stopped about 7 or 8 car lengths behind the rear end of extra 1103, which was

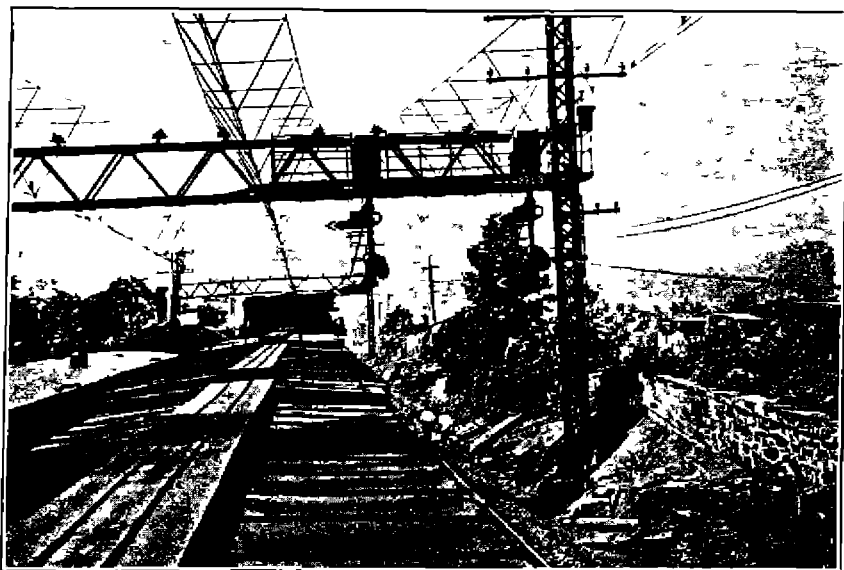


No 1—View showing how caboose was crushed between motor 0102 and the box car which was immediately ahead of it.

standing east of the home signal at East Port Chester. He had released the train brakes and had been standing about 2 minutes with the independent engine brake applied, in order to hold the slack, when he felt the shock from the collision, which moved his engine ahead about 10 feet. He did not know what had happened until the conductor of extra 429, which was passing on track 3, told him the rear end of his train had been struck.

Conductor White, of extra 098, stated that after leaving Stamford he was riding in the cupola of his caboose. On account of having 51 cars in his train he could not see any of the signals before his engine passed them, but he observed every signal between Stamford and the point of accident, standing in the stop position as his caboose passed under them. His train stopped at signal 2701, released brakes, and proceeded again. He observed the flagman going out

on the rear platform of the caboose when the stop was made, but did not notice whether or not he got off. When the train started the flagman came into the caboose, and when the train began to slow down again preparatory to stopping behind extra 1103 the flagman went out on the rear platform again. He further stated that within 4 or 5 seconds after his train stopped behind extra 1103 he got down out of the cupola and saw the flagman about one car length from the caboose, going back. At that time he was preparing to get out to look over his train, when he heard Conductor Bouregarde on extra 429 as that train was passing his caboose call to him to



No. 2 —View of signal 2701, showing general arrangement of signals, power transmission wires, etc

“look out.” The following train was then too close to permit him to get out of the caboose and he attempted to get back up in the cupola, and while doing this the collision occurred. His train had not been stopped over 2 or 3 minutes before it was struck.

Flagman Braz, of extra 098, stated that his train stopped at signal 2701. He got off and had put one torpedo on the rail when the train started again and he had to run to get on. When his train slowed down to make the stop behind extra 1103 he dropped off the caboose before it came to a stop and started back with a full set of flagging equipment. The following train was not in sight when he got off the caboose, but showed up suddenly and was about 35 car lengths distant when he first saw it. He then placed two torpedoes on the rail and ran back, waving stop signals with his red lantern, and was back about 12 or 15 car lengths when motor 0102 passed him at a speed of

20 or 25 miles an hour without reducing speed There were no signs of the brakes being applied

Engineman Aufford, of extra 429, stated that while he was switching at Greenwich freight house on track 3, extra 098 passed on track 1 He further stated that when leaving Greenwich freight house on track 3, the signal on bridge 272 governing track 3 displayed a clear indication, while the signal on track 1 was displaying a stop indication The signal on bridge 260 was clear for track 3 and displayed a stop indication for track 1 The rear end of extra 098 was standing just west of the signal on track 1 with the red markers burning on the rear of the caboose Fireman Schlender and brakeman Brogan, of extra 429, corroborated the statement of Engineman Aufford relative to the signal indications, and further stated that they saw the flagman of extra 098 getting off the caboose just as the following train had come around the curve at the east end of the straight track

Conductor Bouregarde, of extra 429, stated that his train left Greenwich on track 3 He went out on the rear platform of the caboose near the rock cut, at about the top of the hill At that time his train was running about 15 miles an hour and began to increase speed He stated that he saw train MH 3 approaching on track 1 It gained on extra 429 until the motor was almost alongside of his caboose Signal 2701 was displaying a stop indication, the flagman of extra 098 was about 12 or 15 car lengths back from his caboose and jumped over towards track 2 out of the way of motor 0102 Conductor Bouregarde further stated that he saw the engine-man on motor 0102 leaning over with his head against the side of the motor apparently asleep He shouted to the engineman in the hope of arousing him but his efforts were futile He then shouted as he passed the caboose of extra 098 for the benefit of anyone who might be in it He stated further that motor 0102 on track 1 was only a few feet behind the caboose of extra 429 when the collision occurred He saw flashes continuously flying from the contact between the pantagraph on motor 0102 and the power wire, indicating that power was being used until the collision occurred

Flagman Boyle, of extra 429, made a statement substantially the same as that of Conductor Bouregarde

Conductor Foley, of train MH 3, stated that a terminal air-brake test was made on his train at Midway, and all brakes were operating except on two cars No change was made in his train except changing locomotives at New Haven After leaving New Haven the air gauge in the caboose registered 70 pounds Two stops were made at Stamford by applications of the brakes and after leaving that point the gauge in the caboose registered between 65 and 70 pounds

The speed of his train at the time of the collision was about 18 miles an hour. The shock came suddenly as if an air hose had burst on a train line pipe broken, which he thought had occurred until he went to the head end and saw the wreck.

Fireman Bruce, of train MH 3, stated that while standing behind extra 098 at Stamford every one on the motor got off on the ground except Instructor Engineman Rust. After extra 098 started Engineman Brickley took his place on the right or engineman's side of motor 0102 and took charge of the motor, and Engineman Rust walked over and sat down on the fireman's seat on the left-hand side. He further stated that when his train started to move from Stamford he started the flange oilers and went back to the rear of the motor, then came forward changed the dampers, and went into the front end or engineman's compartment. Engineman Rust looked around at him and Engineman Brickley told him to "go on back." This occurred just after they left Stamford. He then went back to the rear end of the motor and talked with Brakeman Todd who was also riding in that end of the motor. They were talking together when the collision occurred, without any warning and without the brakes being applied. He and Brakeman Todd then got out at the rear end and went forward, where he could see Engineman Brickley through the window on the engineman's side pinned down by the controller box and the debris. He called to Brickley who responded and asked "what happened?" repeating the question several times.

Road Foreman of Engines Deller and Superintendent of Electric Transmission Gillian stated that when they arrived at the wreck they made an examination of the motor and found the brake-valve handle in the running position which indicated that the brakes had not been applied. The controller box was bent over and the quadrant casting broken off by the accident which would leave the controller throttle free to be moved either way with the least resistance. Therefore the position in which the throttle was found after the collision would not be a positive indication of its position at the time of the collision.

Signalman Buckbee, who was on duty at signal station 27 at East Port Chester, stated that a heavy ground came in on the electric switchboard at 5 33 a. m., which apparently was caused by the wrecked cars coming in contact with the wires, and indicated that the wreck occurred at that time. He straightened up the switchboard and got the power back on the track and was then told by Conductor Bouregarde about the collision. Extra 429 passed his station at 5 35 a. m.

Signal Supervisor Doward stated that he arrived at the scene of accident at about 8 a. m. and found both tracks 1 and 3 occupied by cars between bridges 260 and 272 in addition to the obstruction

west of bridge 260. The signals governing tracks 1 and 3 were all in the stop position at both bridges. He examined the relays and found everything in good condition, except that the signal maintainer had previously removed the fuses at bridge 260 in order to hold the signals in the stop position, as is their custom when an accident occurs. After the tracks were cleared the fuses were replaced and the signals operated properly.

The testimony of the crew of extra 429, which was moving westward on track 3 just a few feet in advance of train MH 3, which was approaching on track 1, that signal 2701 was in the stop position for train MH 3 together with the fact that the signals worked properly without any repairs after the tracks were cleared and the fuses replaced is conclusive evidence that the signals did not fail to give the proper indications.

This accident was caused by failure of Engineman Brickley, of train MH 3, to obey the stop indication of automatic signal 2701 and the stop signals of the flagman of extra 098. A contributing cause was the failure of Instructor Engineman Rust to observe the signals and cause compliance with their indications. While his specific duty was to instruct the engineman in the operation of the motor, it was inherently his duty also to observe and require proper performance of duty on the part of Engineman Brickley, whom he was required to accompany from New Haven for the safe operation of the train.

In view of the fact that the signals were displaying proper indications that the straight track afforded an unobstructed view of 3 000 feet approaching the place of accident that the weather was clear and there was nothing to prevent the signals and rear end of extra 098 from being seen had the engineman in charge of train MH 3 been on the alert, that there was no apparent reduction in the speed of train MH 3 nor attempt made to stop, and the statement of Conductor Bouregard that he saw the engineman of motor 0102 leaning over with his head against the side of the motor, it is believed that both Engineman Brickley and Instructor Engineman Rust were asleep.

While the interval between the time when extra 098 stopped and the time of the collision was so short that the flagman may not have been reasonably expected to get back farther than he did the evidence shows that he failed to drop a fusee as required by the rules at either the stop at signal 2701 or the slow down for the flagman of extra 098 west of the signal. It can not be said whether or not a fusee so displayed would have attracted the attention of the enginemen on train MH 3 and prevented the accident or minimized the effect, yet Flagman Biaz was derelict and is therefore censurable for

his failure to provide all the protection to his train required by the rules

Conductor White is also censurable for his failure to observe and require proper performance of duty by his flagman

This accident is another reminder of the inherent weakness of the human element in train operation against which the most modern system of automatic block signals does not guard, and again directs attention, as has been done in numerous previous investigations, to the necessity of the adoption and use of some automatic train-control device which will assume control of the train on the failure of the engineman to obey signal indications

At the time of the accident Engineman Brickley had been on duty 10 hours and 30 minutes, after having been off duty 8 hours and 55 minutes Instructor Engineman Rust had been on duty 4 hours and 30 minutes, after having been off duty 19 hours and 10 minutes Enginemen Brickley and Rust were promoted to enginemen in December, 1906, and October, 1907, respectively Their personal discipline records were clear since May 11, 1918

Respectfully submitted

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Chief, Bureau of Safety

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