INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE NEW YORK, NEW HAVEN AND HARTFORD RAILROAD NEAR THOMASTON, CONN., ON JANUARY 23, 1929.

April 25, 1929.

To the Commission:

On January 23, 1929, there was a derailment of a passenger train on the New York, New Haven and Hartford Railroad near Thomaston, Conn., which resulted in the death of two employees and one passenger and the injury of seven passengers. The investigation of this accident was made in conjunction with representatives of the Public Utilities Commission of Connecticut.

Location and method of operation

This accident occurred on that part of the Waterbury Division which extends between Devon and Winsted, Conn., a distance of 55.83 miles, in the vicinity of the point of accident this is a single-track line over which trains are operated by time-table, train orders and a manual block-signal system. This accident occurred at a point 3.89 miles north of Thomaston, approaching this point from the south there is a compound curve to the left 1,876.43 feet in length with a maximum curvature of 4° 16' and then tangent track for a distance of 397 13 feet, followed by a compound curve to the right 1,067.78 feet in length, consisting of a curvature of 1° 09' for a distance of 433.13 feet, 8° 02' 36" for a distance of 159.66 feet, and 6° 59' for a distance of 475 feet, the accident occurring on this curve at a point 196.2 feet from its north or leaving end. The grade varies slightly, being 0.3 per cent ascending at the point of accident. Special instructions in the current time-table restrict the speed to 35 miles per hour on the curve at Castle Bridge crossing, which is the curve on which this accident occurred, in addition there is a permanent slow-speed board located about 300 feet south of the compound curve, also restricting speed to 35 miles per hour.

The track is laid with 80-pound rails, 33 feet in length, with 20 ties to the rail-length, tie-plated, and double-spiked on the outside and single-spiked on the inside, the track is ballasted with cinders. The gauge is 4 feet 8 3/4 inches, while the superelevation varies on the compound curve, being 1 1/2 inches on the 1° 09' curve, 6 inches on the 8° 02' 36" curve, and 5 1/2 inches on the 6° 59' curve. Bridge 39.93, on which this accident occurred, is 15 feet in length The track was resurfaced and relined in the fall of 1928 and is well maintained.

The weather was clear at the time of the accident, which occurred at about 8.15 a.m.

Description

Northbound passenger train No. 1204 consisted of one coach and one combination passenger and baggage car, of wooden construction, hauled by engine 1029, and was in charge of Conductor Rock and Engineman Burns. This train departed from Thomaston at 8.11 a.m., one minute late, and was derailed at bridge 39.93 while traveling at a high rate of speed.

The engine turned over on the outside of the curve and buried itself nearly 5 feet in the earth at a point 322 feet north of the bridge, the engine trucks were thrown 42 feet north of the engine, while the headlight and a few other small portions of the equipment, including steps from the coach, were found about 60 or 65 feet north of the engine. The coach came to rest on top of the engine, being completely demolished, while the combination car became uncoupled and continued on the tracks, stopping at a point about 700 feet north of the bridge. The employees killed were the engineman and fireman.

Summary of evidence

Conductor Rock stated that at the time of the accident he was riding in the combination car working on his reports and noticed nothing unusual in the operation of the train. His first intimation of anything wrong was a jarring of the car and the front end seemed to rise and then fall back on the track. He thought the car was derailed and when he looked ahead he saw the track was clear and wondered if they would run into the engine and first car before they stopped. On going back to the point of accident he found nothing wrong with the track, nor was there any indication that something had fallen from the train, and he stated that he did not think his train had

been traveling at a high rate of speed. Conductor Rock further stated that his train was on time at Thomaston, at which point he received a train order, he delivered this order to Engineman Burns, who read it back to him, and at that time the engineman appeared perfectly normal. Conductor Rock said he had complete confidence in Engineman Burns and entrusted the entire situation to him. It also appeared from his statements that Engineman Burns had not operated a steam engine in the past 20 days. Baggagemaster Bertrand stated that he had noticed nothing irregular in the operation of the train and he did not think the train was traveling at an unusual rate of speed, although he was unable to estimate the speed at the time of the accident. He did notice, however, a reduction in speed for the curves at White Rock and River Bridge, the restricted territory south of the point of derailment.

Conductor Stroker, who was deadheading and was riding in the combination car, stated that he noticed an air-brake application at White Rock curve, which is between 2½ and 3 miles south of the point of accident, but he did not notice any reduction in speed approaching the curve at Castle Bridge. He was looking ahead and saw the car ahead lurch and tip over, his own car then raised 2 or 3 feet and dropped back again and continued on the track until it came to a stop. He also stated that when the air hose broke it caused the brakes to apply He was unable to give an estimate of the speed, but thought it was not excessive.

Bridgeman St. Mary, who was riding in the combination car, stated that he noticed no reduction in speed at any time after leaving Thomaston and he thought the train was traveling much faster than usual. As the train entered the curve the car rolled considerably and gave an unusual lurch which caused his lunch box and tool kit to fall from the rack. The statements of Bridgeman Seger and Wheeler, who were also riding in the combination car, practically corroborated those of Bridgeman St. Mary. Bridgeman Seger stated that the surging of the car rolled him from one side of the seat to the other before going under Castle Bridge, near the southern end of the curve on which the accident occurred, while Bridgeman Wheeler stated that he had noticed the car ahead rolling and swaying and about three or four seconds after the lunch box was thrown fromthe rack he saw the car leave the track. The statements of Bridgeman Gagne and Fireman Starks, who were also riding in the combination car, were

evasive and brought out nothing additional of importance.

Division Engineer Bieth stated that he arrived at the scene of the accident about an hour after it occurred, and his examination of the track disclosed that the first mark of derailment was on the west guard timber at the south end of bridge 39.93, there was then a well-defined mark along the angle iron and along the top of the guard timber, and the north end of the timber was split, showing indications of having received a blow, The next mark appeared on the seventh cross tie north of the bridge, and from this point northward there were from one to four marks per tie, with some of the ends of the ties partly broken off, until a point about 200 feet north of the bridge had been reached. There was also a mark on the west guard rail 53 feet north of the south parapet of the bridge, this being the only mark between the rails. Division Engineer Bieth found the track in good condition except at a point about 150 feet north of the bridge where the gauge was 1/4 inch tight and the rail was slightly kinked, this being the only place that it was found necessary to repair after the accident Mr. Bieth further stated that the slow board for northbound trains can be seen from the engineman's side a distance of 500 feet and that the speed restriction is not effective until the engine has reached a point 300 feet beyond the slow board, which would give an engineman a distance of 800 feet in which to reduce the speed of his train to 35 miles per hour as required. Division Engineer Bieth stated that in his opinion the accident was due to excessive speed.

Train Dispatcher Boxx, on duty at the time of the accident, stated that he issued a train order, Form 31, to train No 1204 at Thomaston, which was completed at 8.10 a.m., and the train departed at 8.11 a.m , that at 8.15 a.m. he heard a noise and hum on the wires and was unable to get in communication with any one, and he made a notation on the train sheet "No phone between Waterbury and Winsted."

Locomotive Inspector Courtney stated that he made a thorough inspection of engine 1029 on the evening prior to the accident and reported the work found, which consisted only of minor defects. The engine was in good condition, the main reservoir pressure was 130 pounds and the brake-pipe pressure 110 pounds, the brake valve worked properly and the piston travel was within the requirements; the foundation brake equipment was in good condition and the pilot was in alignment and showed no

indications of rubbing or being low. Engine 1029 performed no service after his inspection until its departure on the morning of the accident Car Inspector Donaldson stated that his inspection of train No.1204 before its departure from Bridgeport, its initial terminal, disclosed everything to be in good condition and the brakes functioning properly Air Brake Machinist Koefe stated that during the night prior to the accident he made an inspection of the air brakes on engine 1029 and except for tightening up a lock nut on the adjustment screw the brakes were in perfect condition.

Section Foreman Rosso, who has jurisdiction of that section of track on which the accident occurred, stated that an inspection had been made of the track on January 22, and that his inspection of the track after the accident disclosed the track to be in good condition.

Master Mechanic Nelson stated that engine 1039 was given class 5 repairs in June, 1928. Upon his arrival at the scene of the accident he found the engine truck, boxes, etc. thrown 40 feet ahead of the engine. Six pedestal jaws were broken, the frame on one side was broken in two places, equalizers and springs were out of place and three boxes broken. His examination of the engine-truck wheels disclosed no irregularities and he found nothing about the engine that would have contributed to the occurrence of the accident in any respect. The engine afterwards was brought to the Waterbury shops on its own wheels. He further stated that the engine was in good condition on its departure from its initial terminal on the morning of the accident and in his opinion the accident was due to excessive speed. This particular type of engine --Pacific type-- had been running over this division for years and to his knowledge this was the first derailment on this curve. The work reports of engine 1029 prior to the accident revealed nothing that could in any way have contributed to the accident. The testimony of Mechanical Superintendent Harris practically corroborated that of Master Mechanic Nelson and brought out nothing additional of importance.

An examination of the track was also made by Maintenance Engineer Ovlatt and he found nothing in addition to the situation as disclosed by the testimony of Division Engineer Bieth. Mr. Ovlatt also stated that it was his opinion that the accident was caused by excessive speed.

The statements of Superintendent O'Hanley brought out nothing additional of importance in regard to the general condition of the track. He considered that the track was in good condition and in no way responsible for the derailment, which in his opinion was due to excessive speed. He further stated that Engineman Burns had handled a steam engine about 90 times on trains Nos. 1204 and 1203 since he first qualified on April 8, 1928, to operate gas-electric cars, and was fully familiar with their operation. Engineman Burns, who had been in engine service over 50 years, has passed an annual physical examination for the past five years, had been examined on the book of rules, and had always qualified in the monthly efficiency tests, in addition he had been checked monthly with respect to the observance of speed requirements and at no time did the check show any excessive speed.

A detailed inspection was made of engine 1029, which is of the Pacific 4-6-2 type, but nothing was found that could have contributed to the occurrence of this accident. The damage to the track was practically limited to the bridge guard timber and the ends of the ties north of the bridge. The marks indicated that the engine continued in a straight line after being derailed, instead of following the curve.

None of the witnesses were able to state the time the accident occurred. It would appear, however, that the accident occurred at 8.15 a.m., the time when the wires were lost, and it is estimated, therefore, that train No. 1204 traveled 3.89 miles, the distance from Thomaston to the point of accident, in about four minutes or at an average speed of 58 miles an hour.

Conclusions

This accident was caused by excessive speed on a sharp curve.

Examination of the track after the occurrence of the accident showed that it was in good condition with the exception of the fact that the gauge was slightly tight at a point about 165 feet north of the first mark of derailment, and it did not appear that track conditions had anything to do with the cause of the accident. The only damage sustained by the track consisted of a split guard timber at the leaving end of the bridge, followed

by damage to the ends of the ties on the left side of the track north of that point, and the only mark between the rails was on a guard rail at a point about 53 feet north of the bridge. A detailed examination of the engine also failed to disclose the presence of anything which could have contributed to the derailment The evidence further indicated that the air brakes, which were in good condition, probably were not used after the train departed from Thomaston, and apparently the train had been operated from Thomaston to the point of accident at an average speed of close to 60 miles per hour. While some of the witnesses were reluctant to make any estimates as to the speed of the train at the time of the accident, the statements of others were to the effect that it was much higher than usual and that the cars rolled and lurched to a considerable extent as the train started around the curve on which the accident occurred. These facts point to the conclusion that the train was being operated at an excessive rate of speed, and are confirmed by the further fact that there were no marks of derailment between the rails, with the exception of the marks on the guard rail, and apparently the speed of the train was sufficient to cause the engine to turn over from centrifugal force without having any of the wheels on the right side come in contact with the track.

All of the employees involved were experienced men, and at the time of the accident none of them had been on duty in violation of any of the provisions of the hours of service law.

Respectfully submitted,

W. P. BORLAND,

Director.