

In re investigation of an accident which occurred
on the Nashville, Chattanooga & St. Louis
Railway near Atlanta, Ga., on Sep-
tember 26, 1917.

October 31, 1917.

On September 26, 1917, there was a rear-end collision between a freight train and a freight transfer on the Nashville, Chattanooga & St. Louis Railway near Atlanta, Ga., which resulted in the injury of eight employees. After investigation of this accident the Chief of the Bureau of Safety reports as follows:

This collision occurred within the yard limits of the Atlanta Terminal, on the Atlanta Division of the Nashville, Chattanooga & St. Louis Railway, which yard extends between Atlanta and Bolton, a distance of 6.88 miles. The general course of the Atlanta Division is north and south, but in the vicinity of the accident the line of track is such that southbound trains run in an easterly direction and northbound trains, correspondingly, in a westerly direction; train movements over this division are governed by timetable and train orders.

At Howell, about 3 miles north of Atlanta station, the tracks of the Nashville, Chattanooga & St. Louis Railway cross over those of the Southern Railway Belt Line at grade, crossover movements being controlled by an interlocking plant operated from tower No. 1, located at the crossing, 1,250 feet west of which the collision occurred. The home interlocking signal for southbound trains is located 475 feet west of the crossing and the distant signal is about 2,000 feet west of the home signal.

Southbound freight transfer, en route to the transfer point of this railway with the Central of Georgia Railway, consisting of 20 loaded cars being pushed ahead of switching locomotive 420, was in charge of Engine Foreman Helms and Engineman Lanier. It left the yard at Hill's Park, which place is 2.43 miles from Howell, at 10.21 p. m. The distant signal for the crossing at tower No. 1 was in the caution position, and the transfer proceeded to within about a car length of the home signal, which was in the stop position about 10.28 p. m. After two or three minutes, upon the signal having been cleared, the transfer started forward and had moved several car lengths when it was struck from the rear by train No. 23.

Southbound local freight train No. 23, drawn by locomotive 39, was in charge of Conductor Matthews and Engineman Jones, and left Dalton, Ga., 99 miles north of Atlanta, at 8:40 a. m. At Kennesaw, 25.64 miles from Atlanta, the conductor received instructions from the chief dispatcher to bring his train to Marietta Street, Atlanta, if possible to do so within the 16-hour service limit, which expired for this crew at 10:50 p. m. Train No. 23 passed Bolton at 10:27 p. m., and at 10:32 or 10:33 p. m. collided with locomotive 420, while traveling at a speed of about 25 miles an hour. At the time of accident there were five loaded cars and a caboose in train No. 23.

The point of collision was on a 5-degree 46-minute curve to the left, 720 feet long, about 275 feet beyond its western end. This curve is followed by a 6-degree curve to the right, 600 feet in length, which in turn is followed by 250 feet of tangent track to tower No. 1. Approaching the curve on which the accident occurred from the yard at Hill's Park there is an almost unbroken series of curves ranging from 2 degrees to 5 degrees 46 minutes. The collision occurred on a long grade approximating one-half of one per cent, ascending for southbound trains. Beginning 250 feet west of the point of collision and continuing to a point 250 feet east of it, there is a cut varying in depth from 25 to 50 feet.

Locomotive 39 was slightly damaged, it being the only part of train No. 23 to sustain damage. The tender of locomotive 420, which was the part struck by train No. 23, was forced into the gangway of the engine, destroying the engine cab; the rear end of the tender was derailed. As a result of the collision the oil headlight on locomotive 420 exploded; the car ahead of it was ignited thereby and destroyed. At the time of the accident the weather was clear.

The timetable in effect on the Atlanta Division contains special instructions governing main line speed regulations as follows:

"Between Atlanta and Bolton all trains must run so as to be able to stop within range of vision. Train orders will not be required between these points."

Switchman Mansum, of the transfer, stated that trains on which he has ridden have often stopped in the cut where the accident occurred and always been protected by flag; and that in this instance, about 15 seconds after the train came to a stop, he got down off the south end of the car next to the engine and started back to flag. He said that

when he reached the tender he looked over but did not see anything of an approaching train; he then turned and saw a proceed signal being given by the middle brakeman, returned to the car next to the engine and gave the engine-men a proceed signal, and the train started forward about two minutes after having come to a stop. He said it had moved about 4 car lengths when train No. 23 collided with it. Switchman Mangum stated that he remembered a bulletin instructing men to use great care in flagging and mentioning the cut in which the accident occurred as being one of the most dangerous points on the division.

Engine Foreman Helms, of the transfer, stated that he had seen bulletins instructing that trains be protected by flag in the cut; and that, while not positive, he believed that Switchman Mangum started back to flag when the transfer stopped near the Southern Railway crossing.

Engineman Lenier, of the transfer, stated that when it came to a stop near the Southern Railway crossing he saw the switchman on the car in front of the locomotive cross over to the left side of the car, out of sight, but that he was not gone more than a minute and a half before he returned and gave him a proceed signal. He stated that the transfer was not delayed more than 2 minutes, and that after it had proceeded one or two car lengths he saw a flash of light, his first intimation of the approach of train No. 23, just before the collision occurred. He stated that as a rule when trains of which he was an engineman came to a stop at this crossing he whistled out a flagman, but did not do so on this occasion, because of other duties.

Engineman Jones, of train No. 23, stated that, while not compelled to take the train to Magnolia Street, other trains had been placed on sidings for his train, and he therefore felt it was desired of him and was his duty to do so. He stated that he was familiar with the rule requiring trains to be run between Bolton and Atlanta prepared to stop within range of vision; that his train was traveling at too great a speed within yard limits, but that this was done because he was endeavoring to reach Magnolia Street before exceeding the 16-hour period on duty. He said that until near the distant signal for the Southern Railway crossing the speed was about 25 miles an hour; that he was within 6 or 7 car lengths of locomotive 420 when he first saw it; that the speed of his train was then 10 or 12 miles an hour; and that he at once applied the brakes in emergency, but the intervening distance was too short to permit of the train being stopped before colliding with locomotive 420. He said that the proper speed, in the interest of safety, would have been about 6 miles an hour in the vicinity of the accident. Engineman Jones stated that he had not previously found southbound trains standing there, but expected that if any train was standing on the

track ahead of his train it would be protected by flag.

Conductor Matthews, of train No. 23, stated that his train passed Bolton at 10:27 p. m.; that the distant signal for the Southern Railway crossing was in the caution position, the steam was shut off and the train was drifting as it approached the point of accident, and he considered the speed as being sufficiently under control to stop at the crossing. He stated that he was riding in the cupola of the caboose when he first saw locomotive 420, that the brakes were applied in emergency, and that the speed was 20 or 25 miles an hour when the collision occurred, at 10:31 p. m. Conductor Matthews stated that he was familiar with the rules concerning train movements between Bolton and Atlanta, according to which his train should have been so run as to admit of its being stopped within range of vision. He said that his engineer could not see locomotive 420 until within 6 or 8 car lengths of it, and that the light on the rear of that locomotive was burning. Conductor Matthews stated that the speed of his train was 30 or 35 miles an hour as it passed Bolton and proceeded through the yard. He said that it was customary for his train to be operated within yard limits at so great a speed, which he realized to be excessive, but he did not take any steps to have it reduced because an effort was being made to reach Magnolia Street before the expiration of the 16-hour period on duty, as a message had been received at Kennewaw to do so if possible, and because he thought the engineer knew what he was doing; he thought it was against the rules to apply the brakes from the caboose except in case of emergency. He said that the air brakes on all the cars in his train were operating properly.

Fireman Morgan, of train No. 23, stated that between Bolton and the point of accident the speed of his train was consistently about 25 or 30 miles an hour; that he knew that between Bolton and Atlanta trains were to be run so as to be able to stop within range of vision, and that therefore the speed should not have been more than 4 or 5 miles an hour at the out where the accident occurred. He stated, however, that they were trying to reach Magnolia Street before being on duty more than 16 consecutive hours, as the conductor had received a message to bring the train in if possible, but that that did not justify the violation of rules by running at too great a speed, and that they could have tied up at Hill's Ferry, as had been done on previous occasions.

Flagman Jackson, of train No. 73, stated that he was riding in the caboose approaching the point of accident; that the speed was 25 or 30 miles an hour and he remarked to the conductor that if that speed were maintained they would hit something before reaching Atlanta, but that in as much as their 16-hour period on duty was soon to expire the conductor did not make any effort to stop the train. He stated that while a message had been received at Kennesaw, to bring the train to Atlanta if possible, there was no particular reason why they could not have tied up at Hill's Park or Howell. He said that in the vicinity of the accident the speed should not have been greater than 10 miles an hour in order to enable the train to be stopped within range of vision.

Brakeman Mashburn, of train No. 73, who was riding in the caboose, stated that the speed was 25 or 30 miles an hour until the distant signal for the Southern Railway crossing was reached, when it was reduced to 20 or 25 miles an hour. Brakeman McMan, who was also riding in the caboose, stated that in his opinion the speed was 35 or 40 miles an hour when his train passed Bolton, and about 30 miles an hour when the collision occurred.

Terminal Trainmaster McCord, of Atlanta, stated that within yard limits all trains are required to run prepared to stop within range of vision. He said that the cut in which the collision occurred is one of the most dangerous places on the division, and that a speed of more than 6 or 7 miles an hour would be unsafe there. He said that he had at least verbally given special instructions that, as an extra precaution, trains occupying the main tracks within yard limits, in the vicinity of the yard at Hill's Park and the cut mentioned, should be protected by flag; he thought he had also issued written instructions to that effect, but he could find no copy thereof. He stated that these instructions had been particularly impressed upon the employees coming within his jurisdiction and he found that they were usually complied with, especially in the cut.

According to the testimony of Conductor Matthews, train No. 73 passed Bolton at 10:27 p. m. and collided with the transfer at 10:33 p. m., having consumed 6 minutes between the two points. The distance is about 3-1/2 miles, and the speed therefore must have averaged 35 miles an hour.

This accident was caused by train No. 73 being over the yard limits at too high a rate of speed to enable the engineman to stop the train within range of vision, for which Engineman Jones and Conductor Matthews were responsible. Both

men knew that the speed was too fast between Bolton and the point of collision, the conductor stating that he did not take any steps to bring the train to a stop or have the speed reduced, as an effort was being made to reach Magnolia Street before exceeding the 16-hour period on duty, because he had received a message to do so if possible.

Terminal Trainmaster McCord claimed that he had issued bulletins instructing crews to protect their trains by flag when occupying the main tracks in the cut where the collision occurred, that being one of the most dangerous points on the division. No copy of any such bulletin could be found, but some of the crew of the transfer involved in the collision admitted having seen such instructions. Under date of May 17, 1912, a bulletin was issued over the signature of the superintendent, providing in part as follows:

"All trains and yard engines will run so as to stop within range of vision between Hill's Yard and Union Depot, Atlanta. This does not relieve trains and engines from protecting in circumstances may require."

The testimony of employees involved disclosed that it is customary for flag protection to be afforded trains stopping in the cut near the Southern Railway crossing, but in this instance the engine-men of the transfer did not whistle out a flag, because of other duties. The transfer was delayed only about two minutes there, and during that time Switchman Hensum had only gotten down off the car next to the engine and gone back as far as the tender when a signal was given to proceed and he returned to the top of the car and transmitted the proceed signal to the engine-man.

Engine-man Jones served 4 years as a fireman on this railway and 32 years as an engine-man. Conductor Matthews has been employed 29 years by this company, having been a conductor for 14 years. Both employees had good records. At the time of accident the crew of train No. 23 had been on duty 15 hours 13 minutes; and the crew of the transfer had been on duty about 8 hours.

W. F. R.