

IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE WABASH
RAILROAD NEAR HUNTSVILLE, MO., DECEMBER 22, 1919.

February 3, 1920

On December 22, 1919, there was a rear-end collision between a freight train and a passenger train on the Wabash Railroad near Huntsville, Mo., which resulted in the death of 1 employee and the injury of 9 passengers and 2 employees. After investigation of this accident, the Chief of the Bureau of Safety reports as follows:

The accident occurred on the 17th District of the Western Division of the Wabash Railroad, which extends between Kansas City and Moberly, Mo., a distance of 130.5 miles. For the greater part of this distance and at the point where the accident occurred it is a single-track line. Trains are operated by time table, train orders, and a manual block signal system. The accident occurred .84 of a mile west of Huntsville depot. Approaching this point from the west, there is a tangent of 3,250 feet, followed by a 1°15' curve to the right, 813 feet in length, then 2,115 feet of tangent, followed by a 3° curve to the left, 1,269 feet in length. The first 400 feet of this curve extends through a cut about 10 feet deep, which materially obscures the view. The collision took place at a point about 800 feet east of the western end of this curve, or 400 feet beyond the end of the cut. The grade is nearly 1 per cent ascending for a distance of about 2,000 feet, followed by 1,000 feet of .456 per cent ascending grade to the point of collision. The speed of passenger trains is restricted by time-table to 50 miles an hour, while the speed of local freight trains is restricted to 35 miles an hour. The weather was cloudy.

Eastbound local freight train No. 70, en route from Brunswick, Mo., to Moberly, consisted of engine 2025, 34 cars and a caboose, in charge of Conductor Love and Engineman Grugin. It left Brunswick at 1.20 p.m. and arrived at Clifton at 4.30 p.m., at which point the crew received a copy of train order No. 119, reading as follows:

No. 12, Eng 698, will run 20 mins late Salisbury
to Moberly.

The order was made complete at 4.49 p.m. The crew also received a caution card, form 442, directing them to proceed cautiously from Clifton to Huntsville, a distance of 6.7 miles, expecting to find train 2d No. 62, another eastbound freight train, in the block. Train No. 70 departed from Clifton at 5.00 p.m., 23 minutes after the departure of train 2d No. 62, and 8 minutes ahead of the time train No. 12 was due to leave Clifton on its run-late order. As train No. 70 approached Huntsville it was flagged by the flagman of train 2d No. 62 and reduced speed to about 5 miles an hour. The flagman of train No. 70 got off shortly before the accident occurred and had gone back but a short distance when he was passed by train No. 12, the collision occurring at 5.23 p.m.

Eastbound passenger train No. 12, en route from Kansas City, Mo., to St. Louis, Mo., consisted of engine 698, 1 combination car, 2 day coaches, 1 chair car and 1 parlor car, and was in charge of Conductor Poore and Engineman Martin. It left Kansas City at 1.00 p.m., on time, and at 4.56 p.m. arrived at Salisbury, where the crew received train order No. 119, previously quoted. On arrival at Clifton at 5.11 p.m., the crew received a caution card, form 442, instructing them to proceed cautiously, Clifton to Huntsville, expecting to find train No. 70 in the block. In accordance with bulletin instructions which restrict the speed of a train receiving a caution card to the speed of the train ahead, the speed of train No. 12 was thereby restricted to 35 miles per hour, which is the maximum speed permitted for trains of the class of train No. 70. Train No. 12 departed from Clifton at 5.16 p.m., 8 minutes late on its run-late order, and at 5.23 p.m., collided with the rear end of train No. 70 while travelling at a speed estimated by the crew to have been from 25 to 35 miles an hour.

Train No. 12 travelled a distance of 215 feet after striking the rear of train No. 70, completely demolishing the wooden caboose of train No. 70 and badly damaging the four steel coal cars immediately ahead of it. None of the equipment in train No. 12 was derailed and only slight damage was sustained by the engine. The employee killed was Engineman Martin of train No. 12.

Dispatcher Merrill, on duty at the time of the accident, stated that he issued train order No. 119 to train No. 12 at Salisbury at 4.47 p.m., instructing the crew of that train to run 20 minutes late from Salisbury to Moberly, a copy of the order being issued to train No. 70 at Clifton at 4.49 p.m. He issued no further orders to train No. 12 until it reached Clifton, where at 5.08 p.m. he issued a caution card notifying the crew that train No. 70 was in the block. It was 5.23 p.m. when the wires went down due to wreckage striking a telegraph pole. He also stated that trains are operated under a permissive block, except that an absolute block is maintained behind passenger trains.

Engineman Grugin, of train No. 70, stated that he received a copy of train order No. 119 at Clifton; he also received a caution card notifying him that train 2d No. 62 was in the block. His train had cleared the switches and was out of Clifton at 5.00 p.m., which, he said, gave him 20 minutes to reach Huntsville and get into clear and he thought that he would have succeeded had he not been delayed by train 2d No. 62. When his train was about a quarter of a mile west of the west passing track switch at Huntsville, he exploded two torpedoes and shortly afterwards was flagged by the flagman of train 2d No. 62. He reduced the speed of his train to about 5 miles an hour, which he thought was as slow as his train moved at any point after being flagged, acknowledged the stop signals of the flagman of train 2d No. 62 and then whistled out his own flagman. He had proceeded at reduced speed to within 3 car lengths of the caboose of train 2d No. 62 when his train was stopped by an emergency application of the air brakes, the train line having been broken as a result of the

collision, he did not feel the impact of collision and did not know that his train had been struck.

Fireman Wigham, of train No. 70, corroborated the statements of Engineman Grugin and estimated that 4 or 5 minutes elapsed from the time their train was flagged until it was struck by train No. 12.

Middle Brakeman Bollinger, of train No. 70, who was riding on the engine, thought that Engineman Grugin did not whistle out the flagman until after the train had stopped. He also stated that there was no conversation on the engine concerning train No. 12.

Conductor Love, of train No. 70, stated that at Clifton he received train order No. 119, together with a caution card advising him that train 2d No. 62 was in the block ahead. His train left Clifton about 20 minutes after train 2d No. 62 had departed and was approaching Huntsville at a speed of about 20 or 25 miles an hour when he heard his engineman sound the whistle answering a flag and the speed of the train was reduced to about 5 miles an hour; he did not hear the engineman whistle out a flag and at the time the engineman acknowledged the flagman's signals he thought it was the engineman of train 2d No. 62, in the passing track, whistling off. He and the flagman were riding on the rear platform of the caboose and they discussed the advisability of placing torpedoes on the rail, but decided that the speed was too great for the flagman to do this and overtake the train. After reducing speed the engineman began to work steam, but when the speed was reduced a second time, at which time the conductor thought the train was heading in on the passing track at Huntsville, he told the flagman he wished they had put down torpedoes before entering the cut on the curve. As the caboose was about to pass around the curve he told Flagman Summers to get off and flag the passenger train, the headlight of train No. 12 was then visible at the top of the hill. The flagman hesitated a moment and then went inside the caboose for his red lantern. He urged the flagman to hurry, but said the flagman did not get off the caboose until sometime after it had passed through the cut. His recollection was that the flagman ran back, but he used no torpedoes and did not light the fusee until after he was on the ground. He thought the flagman got back as far as the western end of the cut. The conductor got off the caboose when he saw train No. 12 pass the flagman without reducing speed. He looked at his watch immediately after the collision and it was then 5.21 p.m. Conductor Love further stated that he expected train No. 12 to follow his train out of Clifton within a reasonable time and understood that he should have been in readiness to afford proper flag protection against that train at any time after it was due out of Clifton on its run-late order, but failed to act sooner because he felt reluctant to delay that train and he did not consider his own train was in danger while on straight track and still moving. He knew that his train was on the time of train No. 12 when it was struck, but stated that had his train not been delayed by train 2d No. 62, it would have been able to clear train No. 12 at Huntsville.

Flagman Summers, of train No. 70, stated that after boarding the caboose at Clifton, he read the orders and noted that they had been given 20 minutes on train No. 12 and also a caution card on train 2d No. 62. He said he knew that train No. 12 would be due out of Clifton at 5.08 p.m. on its run-late order and that he should protect his train after that time. While it was on straight track, about 2 miles west of the point of accident, travelling at a speed of 20 or 25 miles an hour, he looked at his watch and it was 5.10 p.m. He remarked to Conductor Love that they had 20 minutes time on train No. 12 and that, according to the order, that train was then 2 minutes out of Clifton. He and Conductor Love got down from the cupola and went out on the rear platform of the caboose. When their engine had about reached the west passing track switch at Huntsville, the speed of the train was reduced and he was under the impression that they were going to head in on the passing track. About this time Conductor Love remarked to him that he wished they had put down some torpedoes, he thereupon entered the caboose, got two torpedoes and a fusee and came back on the platform. He decided the train was going to fast for him to get off, put down torpedoes and then overtake the train, so he did not get off, this was the only reason he gave for not putting down torpedoes. He considered that his train was safe while moving on straight track and did not throw off a fusee, because it would have caused an additional delay to train No. 12, according to the rule under which a red fusee must not be passed until burned out. He said that conductors were responsible for delays of this character and therefore it was not his practice to throw off fusees unless directed to do so. About this time the engineman sounded a whistle signal, the speed increased slightly, and he assumed that the train was moving up to Huntsville depot because of the passing track being occupied. As the caboose was rounding the curve, the speed appeared to slacken again and Conductor Love told him to get off and flag the following train, as he would rather stop the train than give the engineman a short flag. His red lantern was at the head end of the caboose and he had to re-enter the caboose to get it. The train was travelling about 7 miles an hour when he got off with his red lantern, two torpedoes and a fusee. While at the time he alighted from his train it was slowing down for the second time, he stated that he got off as soon as he thought the caboose had reached a point where the engine man of train No. 12 would not have a clear view of it, and when he started back there was no doubt in his mind that he could stop train No. 12 on the straight track preceding the curve. He stated that he lighted his fusee as soon as he got off the ground, which was about the same time that the engine of train No. 12 was first visible to him, coming around the 1°15' curve about 3/4 of a mile west of where the collision occurred. He started back on a run, on the engineman's side of the track, waving his lighted fusee. He reached the east end of the cut and hesitated at a hand-car take-off located there, then had started to go back farther, but had proceeded but a short distance toward the west end of the cut when he was passed by train No. 12. Flagman Summers claimed to have been near the west end of the cut and said that had he gotten back the distance of another telegraph pole, he would have been out of the cut and on straight track. He was standing on the

engineman's side as the train passed him, no answer to his signals had been given and he did not think the engineman had shut off steam or applied the brakes. He stated that more than 2 minutes had elapsed from the time he got off the caboose until engine 698 passed him. He had the fusee in his hand when train No. 12 passed him, and said he ran back toward his train a distance of about 2 telegraph poles before throwing it away to the side of the track.

Conductor Poore, of train No. 12, stated that he personally delivered train order No. 119 to Engineman Martin at Salisbury and on arrival at Clifton, 22 minutes late, the operator at that place delivered the caution card to the engineman. As he boarded the train on starting from Clifton he looked at his watch and it was either 5.14 or 5.16 p.m. He stated that while he usually pays particular attention to the speed of his train when running under a caution card, he was busy with his work and did not especially observe the speed after leaving Clifton, but did not think it was excessive. He also thought that the weather conditions were such that Engineman Martin could have seen any obstruction in plenty of time to bring the train to a stop. He estimated they were travelling 25 miles an hour when they collided with train No. 70. Shortly after the collision he looked at his watch and it was 5.26 p. m., but this was after he had lighted his lantern and walked to the other end of the car. After his train had come to a stop he observed a burning fusee lying near the fence, opposite the rear coach of his train. On meeting Conductor Love, he asked him if he had a flag out, the latter replied in the affirmative, but said the flagman had been delayed somewhat in getting his red lantern.

Fireman Reinwald, of train No. 12, stated that a caution card was received at Clifton, and Engineman Martin informed him that train No. 70 was in the block ahead. Approaching Huntsville the engine was just emerging at the eastern end of the cut, travelling at a speed of 35 or 40 miles an hour, when he observed the fusee displayed by Flagman Summers. He called to the engineman, who immediately made a service application of the brakes. He said the flagman was not over two telegraph poles back from the caboose, being nearer to the caboose than he was to the cut, but the brilliancy of the fusee made it impossible to see the markers on the caboose of train No. 70 until after the flagman had stopped off the track on the engineman's side, as he saw the markers, he called to Engineman Martin that there was going to be a collision. He jumped from the engine before it had passed the flagman and shortly before the collision occurred.

Brakeman Hulen, of train No. 12, stated that after the collision he observed a burning fusee lying close to the fence on the engineman's side, near the last car of his train, about 200 feet west of the point where their engine had struck the caboose of train No. 70.

The investigation of this accident developed that several block and operating rules were disregarded, and that this accident would not have occurred had the requirements of these rules been observed by anyone of the several employees. In the following

statement of cause and discussion, these features are considered in sequence and not necessarily in the order of relative importance

This accident was caused by train No. 70 occupying the main track on the time of a superior train without proper flag protection, in violation of both block and operating rules, for which Conductor Love and Engineman Grugin are primarily responsible, and by train No. 12, after being admitted into an occupied block under a caution card, not being operated in accordance with the rules governing train movements under those conditions, for which Engineman Martin is primarily responsible.

Rule No. 59, of the rules governing the use of the telegraph block system, reads as follows:

"59. A train must not enter a block ahead of a superior class train, without ample time to clear the block before the superior class train is due to enter."

Under the requirements of this rule, train No. 70, which did not leave Clifton until about 5 p.m., should have been into clear at Huntsville, a distance of 6.7 miles, at 5.08 p.m., which was the time train No. 12 was due to leave Clifton on its run-late order. This was something impossible for it to have done in view of the grades and curves, and especially in view of the fact that a caution card had been issued advising the crew that there was another freight train in the block ahead. Under the circumstances train No. 70 should have remained at Clifton for train No. 12

Operating rule No. 89 provides that

"An inferior train must keep at least five minutes off the time of a superior train in the same direction."

Under this rule, train No. 12 being due at Huntsville at 5.20 p.m. on its run-late order, train No. 70 should have been into clear at that point at 5.15 p.m. Not being into clear at that time, it was occupying the main track on the time of a superior train. Conductor Love and Engineman Grugin, being in charge of the train, are responsible for the violations of block rule No. 50 and operating rule No. 89, above referred to

Operating rule No. 99 reads in part as follows.

"When a train stops or is delayed under circumstances in which it may be overtaken by another train the flagman must go back immediately with stop signals a sufficient distance to insure full protection." * * *

Conductor Love and Flagman Summers knew that their train was occupying the main track on the time of train No. 12 and that their train was being delayed to such an extent that it was in danger of being overtaken by train No. 12 even if that train was being operated at the reduced rate of speed required when running

under a caution card. In spite of these conditions, however, they stood on the rear platform of their caboose, discussing the matter, instead of taking immediate steps to afford the protection required by the rule. A proper regard for safety should have prompted Conductor Love to drop off a fusee or a flag immediately when his train first slowed down approaching Huntsville, as he was fully aware that his train was then being delayed under circumstances in which it was likely to be overtaken by a following train. Instead of doing so, however, he waited until his train was on the curve before instructing his flagman to drop off and flag the approaching passenger train. There was some further delay on account of the flagman not having his flagging equipment readily at hand which resulted not only in reducing the time, already too short, but also in the flagman dropping off some distance around the curve at an unfavorable location for flagging the following train. There can be no excuse for the neglect of these men, both of them experienced employees, to provide proper flag protection for their train. The flagman, however, was acting directly under the supervision of the conductor, and therefore a large share of the responsibility for failure to provide proper flag protection rests upon the conductor.

Block Rule No. 50 reads as follows.

"Responsibility for colliding with trains in a block, when caution card is given, will rest with train receiving and moving under such restrictions, but this will in no way relieve conductor and engineman of train stopping within the block from the observance of Train Rule 99."

Under this rule, the primary responsibility for this accident rests upon Engineman Martin. He knew that train No. 70 was ahead of him, and under bulletin instructions governing the use of caution cards, should not have operated his train at a rate of speed higher than the maximum speed prescribed for a train of the class of train No. 70, or 35 miles an hour. The evidence indicates, however, that the train left Clifton at 5.16 p.m. and traveled the distance to the point of collision, nearly 6 miles, in 7 minutes, or at an average speed of approximately 50 miles an hour. Engineman Martin was an experienced engineman and no reason can be given for his failure to operate his train as required by the rule.

While nominally there was a manual block system in effect on this line, the investigation of this accident indicated that under the current practices it afforded but little of the protection for train movements which that system is designed to furnish. A supplement to the block rules provides in part as follows:

"2. Following trains may be admitted to blocks when necessary to avoid serious delays, provided weather conditions are favorable, and curvature, grades and other track conditions warrant.

"3. Passenger trains will not be admitted under the above rule nor may any other train occupy a block with a passenger train, except to close up at meeting points or for other equally good reasons, and then only under safe conditions."

Notwithstanding these rules, the dispatcher testified in this investigation that a positive block was not provided except for trains following passenger trains, and apparently it was not an unusual occurrence to admit a passenger train into an occupied block under a caution card. Under the rules, caution cards are numbered consecutively, beginning with the number one the first of each month, the caution card issued to train No. 12, on December 22nd, was number 868, which furnishes an indication of the extent to which these cards are used. And if the facts in this case may be taken as a criterion, the restrictions intended to be placed upon trains being operated under caution cards are not generally observed, train No. 12 in this instance having been operated at normal speed through practically the entire block which was known to be occupied by a preceding train, and no material reduction in speed being made when approaching a curve, which obscured the view of the track ahead, and passing-track switches near the end of the block

operating
In view of the lax practices and the utter disregard of rules essential to safe railroad operation which were disclosed by this investigation, it is not surprising that an accident of this character occurred. In order to prevent the occurrence of similar accidents in future, officers of this company should take steps immediately to correct the unsafe practices and conditions disclosed.

Engineman Martin was employed as a fireman in 1894 and promoted to engineman in 1899. Engineman Grugin was employed as a fireman in 1904 and promoted to engineman in 1913. Conductor Love was employed as a brakeman in 1901 and 1904 was promoted to conductor. Brakeman Summers was employed in 1910 as a brakeman. All of these employees had clear records at the time of the accident.

Engineman Martin had been on duty about 10 hours after a period off duty of about 24 hours. Engineman Grugin, Conductor Love and Brakeman Summers had been on duty about 11 hours, previous to which Conductor Love had not performed any service for about six weeks, while Engineman Grugin and Brakeman Summers had been off duty about 36 hours.