

(491)

In re investigation of an accident which occurred on the Southern
Railway near Calhoun, S. C. on
December 14, 1917.

January 30, 1918.

On December 14, 1917, there was a head-end collision between two passenger trains on the Southern Railway near Calhoun, S. C., which resulted in the death of 2 employees and injury to 15 employees and 8 passengers. After investigation, the Chief of the Bureau of Safety reports as follows:

The Charlotte Division, on which the accident occurred, extends from Charlotte, N. C., to Atlanta, Ga. The part of the division extending from Central to Keweenaw, which includes the part involved in this accident, is a single-track line, over which train movements are governed by timetable, train orders and a manual block signal system. Northbound trains have right of track over southbound trains of the same class.

The accident occurred about 300 feet north of the south end of a tangent $1\frac{1}{2}$ miles in length; south of this tangent is a curve through a deep cut about one-fourth of a mile long and then a tangent about 1 mile long. On account of the curve in the deep cut the views of engineers approaching the point of accident from both directions are materially limited. The grade is descending for southbound trains. The weather at the time of the accident was clear.

On the morning of the accident, southbound passenger train No. 43, en route from Washington, D. C., to Atlanta, Ga., consisted of locomotive 1316, 1 express car, 1 combination car, 2 coaches and 3 Pullman cars, and was in charge of Conductor Harrow and Engineman Tedder. This train left Greenville, S. C., at 6.55 a.m., 3 hours and 50 minutes late and at 7.42 a.m. arrived at Central, S. C., where it met northbound train No. 36, Central being the last open station before the point of collision. Train No. 43 departed from Central at 8.07 a.m., 4 hours and 14 minutes late and while running at a speed estimated at about 35 miles an hour, it collided with northbound passenger train No. 46 just north of Calhoun.

Northbound local passenger train No. 46, en route from Westminster, S. C., to Greenville, consisted of locomotive 1351, 1 combination car and 2 coaches and was in charge of Conductor Laird and Engineman Couch. This train left Westminster at 7.25 a.m., on time, and arrived at Seneca, 9.3 miles north of Westminster at 7.40 a.m., departing from Seneca at 7.50

a.m., 3 minutes late. It passed Keosau, 6.3 miles from Seneca at 8.04 a.m., 7 minutes late, and at 8.11 a.m., 8 minutes late, it passed Calhoun, the last open telegraph station before reaching the point of accident, located 2.5 miles from Keosau. At 8.14 a.m. it collided with train No. 43, while running at a speed estimated to be about 30 miles an hour.

The force of the collision practically demolished the locomotive and tender of train No. 43, the boiler being torn from the frame and thrown down the embankment to the right; the cylinders and saddle were broken and the running gear telescoped that of the locomotive of train No. 43. The entire cistern of the tender of train No. 43 was forced into the baggage car next to it, while the trucks of the tender went under the baggage car but were not derailed. The front truck and drivers of the engine mounted the front truck and drivers of the engine of train No. 43, the two rear drivers and trailer remaining on the track. None of the cars of train No. 43 were derailed. The boiler of the locomotive of train No. 43 was torn from the frame and was thrown down the left embankment. The cylinders and saddle were broken, the cistern was badly damaged, while the engine itself was practically demolished. The first car of train No. 43 was also practically demolished, but the remainder of the cars in that train were not derailed and were only slightly damaged.

Conductor Barrow, of train No. 43, stated that his train arrived at Central at about 7.42 a.m. and as soon as the train came to a stop he went into the telegraph office and was given train orders Nos. 45 and 47, the former giving his train right of track over all northbound trains from Central to Keosau, while the latter was a meet order with train First No. 36 at Central. These orders were worded as follows:

45. "Second No. thirty-five 35 and No. 43 forty-three have right over first class trains Central to double track Keosau."

47. "No. 43 forty-three Eng. 1315 meet first No. 36 thirty-six Eng. 1334 at double track Central."

Conductor Barrow stated that he was also given clearance card of form 603 which gave him a clear block between Central and Calhoun on the arrival of train First No. 36. He said that he remained in the telegraph office until the operator at that point informed him that train First No. 36 had passed Calhoun, and that the block would be clear on its arrival at Central; he then went out to his train and instructed his engineman to call in the flagman as soon as he saw train First No. 36 approaching, which he did. Believing he had a clear block, Conductor Barrow did not return to the telegraph office again but at 8.07 a.m., after the arrival

of train First No. 36 at Central, his train proceeded southward to milepost 516-3/4 where it collided with train No. 46. He also stated that just before the collision occurred he heard a short blast on the engine whistle and felt the air brakes applied in emergency.

Engineman Tadder, of train No. 46, stated that on his arrival at Central the block was in the stop position. He pulled his train up to the water tank, took water, and then went to the telegraph office where Conductor Barrow delivered to him copies of train orders Nos. 45 and 47, together with clearance card on form 603. He remained in the office a short time, read the orders to the conductor, returned to his locomotive and upon arrival of train First No. 36, departed from Central. Approaching the point of collision he was looking ahead and saw train No. 46 as it came out of the deep cut, at which time the two trains were only a short distance apart. He stated that he immediately applied the brakes in emergency, sounded the short blast on the whistle, got down on the steps and jumped off just before the trains collided. He further stated that the air brakes on his train were in good working condition.

Conductor Laird, of train No. 46, stated that his train arrived at Seneca, S.C., at about 7.40 a.m., at which point he received 4 bulletin orders and after meeting train No. 36 departed at 7.49 a.m. He stated that he received clear blocks at both Keowee and Calhoun, but received no orders at any point regarding train No. 43 and knew nothing of it until the collision occurred just north of Calhoun.

Third Trick Dispatcher Ayers, located at Greenville, stated that the movement of trains over the 4.3 miles of single track between Central and Keowee became congested between the hours of 7.00 and 8.30 on the morning of the accident and in his effort to accelerate the movements over this territory, he placed with Operator J. L. Brown at Seneca and with Operator Sims at Central order No. 45 on form 31, which gave southbound trains Nos. 36 and 43 rights over all northbound trains from Central to Keowee, and instructed Operator Brown to make only three copies of it. He stated that Operator Brown delivered a copy of this order to northbound train First No. 36 but failed to deliver a copy to the crew of train No. 46 upon its arrival at Seneca at 7.40 a.m. He said that Operator Brown did, however, deliver a block clearance card, form 603, together with 4 bulletin orders, Nos. 515, 527, 545 and 605, which bore no signatures. Dispatcher Ayers stated that it is not the practice to allow operators to issue bulletin orders without signatures. He further stated that at 8.03 or 8.05 a.m., he received the report for train No. 46 from Seneca, but did not record it as the operator failed to sign his initials. He also stated that while taking the report and making the transfer to the first trick dispatcher, who relieved him at 8.05 a.m., he overlooked the fact that train No. 46 had not signed for order No. 45 at Seneca.

Operator J. L. Brown, stationed at Seneca, stated that at the time train First No. 36 was standing at his station, Dispatcher Ayers called him and gave him order No. 45, instructing him to make three copies of it. After making three copies and repeating it he secured the signature of the conductor of train First No. 36 and delivered two copies to him. He then went out to see about some mail and when he returned to the office started straightening up his orders and placed his copy of train order No. 45 on file. He knew there were other sections of train No. 36 and that train No. 46 was close by and that he should have made seven or nine copies of the order instead of three. He admitted he should have called Dispatcher Ayers' attention about making but three copies and that he should have made more copies by tracing the one he had left. He stated further that upon arrival of train No. 46 at Seneca, he delivered to the crew 4 bulletin orders on form 51 without taking the conductor's signature as required by rule but that his failure to comply with the rule in this instance was due to his practice of delivering bulletin orders according to the rules governing form 19 orders. With reference to the handling of clearance card form 603 to train No. 46 he stated he made it out a little while after train 1st No. 36 left his station, entering upon it the 4 bulletin orders and omitting order No. 45. He said that it never entered his mind to include order No. 45 with the others on the card. He reported train No. 46 to the dispatcher at about 7.51 a.m., 11 minutes after its arrival at Seneca and about 2 minutes after its departure.

Operator Sims, located at Central, stated that on the morning of the accident, Dispatcher Ayers placed with him order No. 45, giving train second No. 35 and train No. 43 rights over all northbound first-class trains from Central to Keosau. After this order was made complete the dispatcher gave him order No. 47 fixing a positive meet between trains Nos. 43 and 36 at his station. He stated further that upon the arrival of train No. 43 at Central, Conductor Barrow entered his office and signed for the orders and at 7.45 a.m. he gave the conductor a block clearance to be good upon the arrival of train First No. 36. He said that at 7.51 a.m. Operator A. H. Brown at Calhoun called him and reported train 1st No. 36 by that station and he claimed that at that time he secured the block between Central and Calhoun for train No. 43 as soon as train No. 36 arrived at Central. He said he secured this block by saying to Operator Brown, "No. 43 on arrival," to which Operator Brown responded "E. H. S." Operator Sims further stated that at 8.06 a.m. train 1st No. 36 passed his station and at 8.07 a.m. train No. 43 departed. At about the same time Operator Brown at Calhoun asked him for the block for northbound train No. 46, to which Operator Sims claimed he responded "Hell, no, you gave it to me on arrival of first 36 for 43 and he had entered the block at 8.07." Operator Brown then told him that train No. 46 had already entered the block and after telling Brown to stop them, Sims rushed out of the office to listen for the trains to crash. The testimony and block sheet of Operator Sims confirm each other.

Operator E. H. Brown, located at Calhoun, denied that he gave Operator Sims the block for train No. 43 and stated that he did not hear him ask for it. He also claimed that Operator Sims did not refuse to give him the block for train No. 46 by using the words, "Hell, no." His version of what took place was that after train let No. 36 passed his station he reported the fact to Operator Sims, that Sims said nothing to him at that time about train No. 43 and he knew nothing concerning the whereabouts of that train. He then sold a few tickets and sat down at his table to wait for train let No. 36 to clear the block at Central. As soon as this train cleared at 8.05 a.m., Operator Sims notified him and he asked Operator Sims for the block for train No. 46, receiving a clear block at 8.07 a.m. Within a minute or two later he reported train No. 46 at Calhoun to Operator Sims, upon which Operator Sims told him that train No. 43 was also in the block. He then asked Operator Sims if he did not give him a clear block for train No. 46 at 8.07 a.m. and he claimed that Sims said something and told him that train No. 43 left his station at 8.07 a.m. He stated that as soon as he learned that both trains were in the block he stepped out into the yard to see if there was any possible way of stopping train No. 46, but it was too late.

In a second statement made by Operator E. H. Brown he said that after train let No. 36 passed Calhoun, he sat down at his table and remained at the keys securing the block from Operator Sims for train No. 46 as soon as train let No. 36 cleared it; that there was nothing in or about his office at that time to distract his attention and that he was listening very closely to all that was said to him while communicating with Operator Sims. He also stated that if Sims said what he claimed, he would have had no difficulty in making out every word of it and he is positive that Sims never said what he claimed to have said to him over the wire. The statements made by Operator Brown agree with his block sheet.

Operator Parsons, stationed at Keosau, stated that at about 8.01 a.m., on the morning of the accident he called Operator Brown at Calhoun and asked him about train No. 43 and was told by Operator Brown that it was at Central. He then obtained the block between Keosau and Calhoun for train No. 46 and reported that train by his station at 8.14 a.m., as well as he could remember. At that time he was under the impression that trains Nos. 43 and 46 had orders to meet at Calhoun. He also stated that he heard no conversation on the wire between Operators E. H. Brown and Sims, nor did he get order No. 45 which gave train No. 43 right of track over train No. 46 to Keosau. He said that if ^{he} had heard this order he would have stopped train No. 46 at Keosau to again ascertain the whereabouts of train No. 43 and whether or not the right-of-track order had been changed.

This accident was caused primarily by the failure of Operator J. L. Brown at Seneca to deliver a copy of train order No. 45 to the crew of northbound train No. 46. This order gave southbound trains right of track

over northbound trains on the single track between Central and Keosau and had train No. 46 received a copy, the train would have remained at Keosau until the arrival of train No. 43. Operator J. L. Brown admitted that he should have made more than three copies of the order when it was given to him by the dispatcher but he followed the dispatcher's instructions and made only three copies. He knew that this order affected more than one train but after giving two copies to the crew of train No. 36, he filed the other copy away without making any additional copies and when train No. 46 arrived at his station he forgot about train order No. 45 and failed to include it with the 4 bulletin orders which he gave to the conductor.

A contributing cause of this accident was the failure of Dispatcher Ayers to have a sufficient number of copies made of order No. 45 at Seneca to protect all of the northbound trains it affected; also his failure to get the signature to it from Conductor Laird of train No. 46. He admits this caused him to overlook the fact that order No. 45 had not been delivered to train No. 46, permitting it to pass 2 telegraph stations without detecting that the crew did not have order No. 45. The investigation developed that the rules governing train orders are disregarded by allowing bulletin orders to be issued on form 31 without receiving the conductor's signature and getting complete for same.

A further contributing cause of this accident was the misunderstanding between Operator E. H. Brown at Calhoun and Operator Sims at Central, which misunderstanding permitted trains Nos. 43 and 46 to occupy a block at the same time. The operator at Calhoun states positively that the operator at Central gave the block to him for train No. 46 while the operator at Central is just as positive that the operator at Calhoun gave the block to him for train No. 43. The block sheets of both confirm their statements and it is impossible to state which one is at fault.

It will be noted that Operator Parsons at Keosau stated that prior to the time train No. 46 passed his station Operator E. H. Brown at Calhoun informed him that train No. 43 was at Central, yet the operator at Calhoun stated in his testimony that he had no knowledge whatever as to the whereabouts of train No. 43. This inconsistency between the statements of Operators Brown and Parsons, however, does not necessarily have any bearing on the question of veracity between Operators Brown and Sims.

The employees responsible for this accident were all experienced men with clear records and at the time of the accident none had been on duty to exceed a period of 8 hours and 15 minutes.