

IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON  
THE ST. LOUIS SOUTHWESTERN RAILWAY NEAR  
MCKINNEY, ARK., ON MAY 21, 1918.

June 18, 1918.

On May 21, 1918, there was a derailment of a troop train on the St. Louis Southwestern Railway near McKinney, Ark., which resulted in the death of 1 soldier and 1 employee, and the injury of 15 soldiers, 3 railroad employees and 3 Pullman employees. After investigation the Chief of the Bureau of safety reports as follows:

This part of the Middle Division of the St. Louis Southwestern Railway on which this accident occurred is a single-track line over which train movements are governed by time table and train orders transmitted by telegraph, no block system being in use.

The train involved in this accident was a troop train en route from Waco, Texas, to St. Louis, Mo. It consisted of locomotive 571, 1 baggage car, 3 Pullman tourist cars, 7 Pullman sleeping cars and a caboose, in charge of Conductor Chalfant and Engineer McAllister, and left Texarkana at 7:15 a.m. with orders to run to Pine Bluff with rights over all except first class trains. Locomotive 571 met the first and second sections of train No. 3 at McKinney, 15.8 miles north of Texarkana, left there at about 8:02 a.m., and was derailed at trestle No. 572, 5.7 miles north of McKinney, at about 8:10 a.m. while running at a speed estimated to have been about 25 miles an hour.

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The entire train, with the exception of the  
caboose and rear trucks of the sleeping car ahead of it,  
was derailed. The locomotive, tender and baggage car  
followed the line of track onto the trestle and then  
turned over, the locomotive coming to rest on its back  
with its wheels leaning against the trestle; the tender  
stopped just behind the locomotive with its cistern and  
trucks torn from the frame; the baggage car lay on its  
right hand side about 10 feet behind the tender with its  
north end close to the trestle and its south end about 15  
feet from the trestle and partially in the water; the  
tourist car immediately behind the baggage car remained  
upright with its north end submerged in about 15 feet of  
water; the following tourist car was also standing upright  
and derailed down the embankment which formed the south approach  
to the trestle, while the sleeping car behind it remained  
upright with its south end on the roadbed and its north  
end partially down the embankment. The locomotive, tender  
and the two tourist cars were considerably damaged and the  
baggage car demolished, while the two sleeping cars were  
slightly damaged. The damage to track and trestle was slight.  
The engineer was killed in the accident.

The track in vicinity of accident consisted of  
75-pound steel rails, 20 feet in length, with 10 oak ties  
under each rail, single spiked, without tie plates, ballast-  
ed with about 8 inches of gravel, and laid on a fill 11 feet  
high at point of derailment. The track is tangent for about

a mile each way from point of accident, is practically level, and is in fair surface and alignment. Trestle No. 978 is 450 feet long and 11 feet high, except where it crosses a gully, at which place it is 26 feet high. The weather at the time was clear.

The first indications of derailment were distinct flange marks on top of and near the center of the right hand rail about 170 feet south of the trestle, these marks continuing on the top of the rail for a distance of 9 feet 6 inches, and then the wheels dropped off to the outside of the rail on the right about 4 feet 4 inches from the joint. At a point 5 feet 3 inches north of where these marks began the base and web of the rail were fractured. The leaving end of that rail was bent toward the center of the track 5 inches and the receiving end of the rail just north of it was bent slightly outward and upward about 3 inches, the ends of the two rails being separated about 6 inches. The outside angle bar of this joint was bent outward and sprung until it was almost flat, and parts of two broken track bolts were found opposite the joint. One of these broken bolts was almost the entire bolt with nut and broken off just back of the nut; the other was the nut end of another bolt broken just inside the nut. The piece of bolt with the nut on it had been in the north hole of the outside angle bar, so both nut and hole were distorted in such manner as to fit exactly. That there were bolts in all the holes at the time of derailment is evidenced by the dis-

portion of all four halves and the heavy imprint of the nuts around the bolts, showing that a great strain was placed on the joint. On the left hand side of the track the first marks on the ties were inside the left hand rail beginning at a point 3 feet 4 inches north of the first mark on the right hand rail, or about 184 feet north of the trestle. The distance from these marks on the ties to the pilot of the locomotive after it came to rest was 400 feet.

Conductor Chalfant of special 371 stated that his train left McKinney at 8:01 A.M., and he was riding in the caboose when the derailment occurred. He sent the brakeman back to flag, and after going to the head end of the train and assisting in removing the injured engineer, went to the rear of the train and examined the track. He found a rail joint south of the trestle, on the right hand side of the track, with the inside angle bar missing and the bolts gone, and the outside angle bar lying on the right hand side of the track; the two rails were about 4 or 5 inches apart, and the north end of the north rail was bent upward and flange marks. The left hand rail also had flange marks on it about opposite the joint which was broken. He was of the opinion that the train was derailed at this joint and thought that somebody removed the angle bars with the purpose of wrecking the train, he having arrived at this conclusion because he could not find the track bolts. He said the track and the trucks of the train were all in good condition. Conductor Chalfant

stated that he rode locomotive 571 a distance of 28 miles the day before the derailment occurred, and it apparently was in good condition. He said his train was running at a speed of 30 or 35 miles an hour at the time it was derailed, and he did not think that the speed of the train or the condition of the track caused the derailment.

Fireman Court of special 571 stated that his train was proceeding at a speed of 30 or 35 miles an hour when he felt the locomotive drop down on the right hand side as if the track had been taken out from under it and all the driving wheels on that side had been derailed, and when he saw that the locomotive was going to turn over, he jumped off. He said he had not noticed any unusual rocking or swinging of the locomotive before it was derailed, but was positive that it was the first part of the train to be derailed.

Head Brakeman McKinney of special 571 stated that he was riding in the baggage car when the train was derailed, and thought the pony truck of the locomotive was the first to leave the track. He said the track appeared to be in the usual condition and he did not notice any unusual swinging of the train.

Engineer Riggins, of northbound train second No. 3, stated that his train passed over the track where the derailment occurred at about 7:57 A.M., or about 13 minutes before the derailment occurred, at a speed of

about 35 miles an hour, and he found the track to be in fair condition and no indications of a broken or defective rail joint.

Engineer Albright, of southbound train first No. 3, stated that his train passed over the track where the derailment occurred at a speed of about 23 miles an hour and arrived at McKinney at about 7:40 A.M. He found the track in good condition and no indications of a broken or defective rail joint.

Engineer Foley stated that he examined the track about two hours after the derailment occurred, and found the angle bars removed from a rail joint south of the trestle; the inside plate was missing, the outside plate and part of the plate that goes under the rail were about two-thirds cut from under the rail. No bolts or nuts could be found, and he was of the opinion that the angle bars had been removed from the joint with malicious intent.

Foreman Powell, of the Bridge and Building Department, stated that he arrived at the scene of derailment 30 minutes after it occurred, examined the track and found the broken joint with the rails 10 or 12 inches apart, the leading end of the south rail bent in towards the center of the track. The inside angle bar and outside wood filler at the joint were missing, the outside angle bar was partially under the rail, and two pieces of two bolts were lying close to the joint. He was of the opinion that the derailment did not occur at that joint, for

there were marks on the ties south of it.

Section Foreman Mellis, in charge of the track where the derailment occurred, stated that the track was in fairly good condition with the exception of one or two low joints, but did not think the derailment was caused by bad track conditions. He was of the opinion that the track had been tampered with and thought the locomotive was the first to be derailed at the rail joint that was found broken.

Division Roadmaster Webb said that he examined the track shortly after the derailment, found its surface alignment and gauge in good condition and thought it safe for a speed of 15 miles an hour. He also examined the trucks of the baggage car and found the lead trucks considerably worn. He thought these trucks were the first to be derailed, which occurred about a half rail length south of the broken joint.

Road Foreman of Engines McFadden stated that he examined trucks of the locomotive and tender of the day after again, could find nothing that should have caused the derailment.

Car Inspector Wilson and Rex stated that they inspected special 671 at Texarkana before it left there on the morning of the accident, paying particular attention to the flanges, wheel gauge, etc., and considered the train in safe condition.

The cause of this accident could not be ascertained.

After the accident a careful examination of the track and equipment was made, but nothing was found that should have caused the derailment, and the statements of the crews of the two trains that passed over that part of the track a few minutes before the derailment, as well as the statements of other employees, indicated that the track was in good condition and safe for a speed of 25 miles an hour.

While some of the employees expressed the opinion that the derailment was caused by some unknown person having tampered with the track, there was no evidence to support that theory. The fact that two trains had passed safely over this section of track a few minutes before the derailment occurred, raises a strong presumption that the track was then in proper condition, and a careful investigation failed to reveal any evidence of the track having been tampered with. The distorted bolt holes and the indentations of the spike heads on the outside angle bar of the broken joint where the accident occurred indicated that it was completely bolted and spiked when special 871 reached that point. The distinct and heavy flange marks found on top of the rail more than thirteen feet south of the broken joint and the direct statement of the fireman that the engine was the first part of the train derailed, indicate that the engine was derailed before it



reached the joint so that the broken joint was a  
result of, and not the cause of, the accident.

All of the employees involved were experienced  
men with good records, and at the time of the accident  
had been on duty one hour and thirty minutes.

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