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IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE CHICAGO, ST. PAUL, MINNEAPOLIS & OMAHA RAILWAY NEAR PEAK, NEB., ON AUGUST 27, 1914.

On August 27, 1914, there was a head-end collision between a passenger train and a light engine on the Chicago, St. Paul, Minneapolis & Omaha Railway near Peak, Neb., resulting in the death of 1 employee and the injury of 32 passengers, 6 employees, 1 mail clerk, 1 news agent and 1 trespasser. After investigation of this accident the Chief Inspector of Safety Appliances reports as follows:

Southbound passenger train No. 3 consisted of one mail car, one baggage car and three coaches, all of wooden construction, hauled by locomotive 276, and was in charge of Conductor McDonald and Engineman Fry. This train left Sioux City, Iowa, at 3:35 p.m. en route to Omaha, Neb. It left Oakland, three miles north of the point of collision at 4:40 p.m., 15 minutes late, and at 4:46 p.m. collided with extra 176 at a point about 1 mile south of Peak while running at a speed believed to have been in the neighborhood of 40 miles per hour.

Extra 176 was a light engine running from North Yard, 1 mile north of Omaha, to Oakland, a distance of 56.8 miles, and was in charge of Engineman Raymond and Fireman Wolcott. At North Yard the crew received a copy of train order No. 30, reading as follows:

> "Eng. 176 Raymond will run extra North Yard to Oakland and meet No. 18, Stephens, at Tyson. Run clearance where signal is clear."

This train left North Yard at 3:45 p.m., passed Craig, Neb., 3 miles south of the point of accident at 4:36 p.m., and collided with train No. 3 while running at a speed of about 30 miles per hour.

The shock of the collision derailed and quite badly damaged both locomotives, while slight damage was sustained by the mail car of train No. 3.

The Nebraska Division, on which this accident occurred, is a single-track line, trains being operated by the train-order system without block signals. The collision occurred on a 2 degree curve, 1,750 feet in length, and at the point of accident there is a descending grade of .8% for southbound trains. For a distance of 3,300 feet north of this curve the track is straight, and commencing at a point 900 feet north of this curve it is laid in a ten-foot cut, 1,250 feet long, extending 350 feet on the curve. Approaching this curve from the south there is a 3 degree reverse curve, followed by 1,300 feet of tangent, and commencing at a point 150 feet south of the 2 degree curve the track is laid in a 5-foot cut, 750 feet long, extending 600 feet in on the curve. Approaching the point of accident the view of the fireman of train No. 3 was limited to about 600 feet, while the view of the

engineman of locomotive No. 176 was limited to about 1,000 feet. The view of the engineman of train No. 3 and the fireman of locomotive No. 176 was obstructed on account of being on the outside of the curve. The weather at the time was cloudy.

Conductor McDonald, of train No. 3, stated that his train left Oakland at 4:40 p.m., and he was without any knowledge of extra 176 being on the road. He stated that his train passed Peak about 4:42 or 4:43 p.m., and while running at a speed of 35 miles per hour the brakes were applied in emergency about one mile south of Peak, followed by the collision.

Engineman Fry, of train No. 3, stated that about one mile beyond Peak his fireman called to him and he applied the air brakes in emergency, at which time he did not think the two trains were more than 250 feet from each other. He knew nothing of extra 176 being on the road until his fireman called to him. He stated that the speed of his train at the time he applied the brakes was about 60 miles per hour but at the time of the collision it had been reduced to about 30 miles per hour.

Fireman Kuppig of train No. 3 stated that he first saw extra 176 when it was about 10 or 12 car lengths away; he called to Engineman Fry, and jumped. He could not say whether or not extra 176 was working steam at the time. He thought the speed of his train at the time of the collision was 40 or 45 miles per hour.

Fireman Wolcott of extra 176 stated that Engineman Raymond read train order No. 30 to him, gave it to him to read, but did not say where they were going to meet train No. 3. That after meeting train No. 15 and extra 116, he remarked to Engineman Raymond, "We have only got to meet No. 3 now," to which the engineman made no reply. When asked where he intended meeting train No. 3, Fireman Wolcott replied that he had not figured on it but had in mind meeting it at Oakland. Although he had fired on train No. 3, he did not know when it was due at Oakland or Crain. A sudden move on the part of the engineman caused him to look up. He saw train No. 3, at which time it was about 400 feet away, and at once jumped off, saying nothing to the engineman and not knowing whether or not the latter applied the air-brakes. At the time he jumped, the locomotive was working steam. The speed was from 20 to 30 miles per hour.

The rules relative to standard time require firemen to use watches which have been examined and certified to by a designated watch inspector. At the time of the accident Fireman Wolcott was not carrying a watch. It appeared that his own watch had been in a pawn shop for more than three months, and that when it became necessary to present a watch to the company's inspector for quarterly inspection, he borrowed one for the occasion, returning it the same day. With this exception he had not had a watch in his possession for more than three months, and on the day of the accident he had no knowledge of his own as to what time locomotive No. 176 left its terminal at North Yard or of the time it passed any station en route.

Investigation also developed the fact that although the rules require enginemen to compare their watches with standard clocks before starting on each trip, and to record the time on the train register, yet Engineman Raymond failed to register his watch and consequently there is no record of its condition prior to starting out on this trip.

This accident was caused by extra 176 occupying the main track on the time of a superior train, for which the crew of the extra is to blame. It is believed that the failure of extra 176 to keep clear of train No. 3 was due either to the failure of Engineman Raymond, who was killed in the accident, to have correct time or to his overlooking train No. 3.

Notwithstanding the negligence of the two employees at fault, it is believed that had an adequate block signal system been in operation this accident would not have occurred. Attention is also called to the fact that on many railroads it is the rule to require a conductor or pilot to accompany light engines when being operated over the road, evidently as a check on the engineman, and to insure the proper operation and protection of the engine. On this railroad, pilots are furnished light engines only when going over the entire division, none being furnished in helper service. If it is expedient, in the interest of safety, to furnish a pilot for light engines when traveling over an entire division, certainly it is equally necessary to furnish a pilot when covering 58 miles of a division, as in this instance.

Both of the employees at fault were experienced men with good records and had been on duty about 8 hours and 30 minutes, after more than 18 hours off duty.