December 3, 1912. No. 86.

Collision on the New York Central & Hudson River Railroad near East Rochester, N. Y., on September 13, 1912.

On September 13 there was an accident on the New York Central & Hudson River Railroad near East Rochester, N. Y., which resulted in the death of 1 brakeman and 2 trespassers, and the injury of 4 employees and 2 trespassers. After investigation of this accident the chief inspector of safety appliances reports as follows:

Train No. A3-5, bound from Albany, N. Y., to Buffalo, N. Y., consisted of 63 cars, 2 deadhead cabooses and the regular caboose, drawn by engine No. 3086, and in charge of Conductor Keller and Engineman Meyers. This train left DeWitt, N. Y., at 6:40 p. m. September 14, passed block station No. 20 at 12:30 a. m. September 13, and at 12:40 a. m. arrived at block station No. 22, running on track No. 3. Block station No. 22 is just west of the passenger station at East Rochester. The train was stopped at this point by a danger indication, and the engineman at once sounded the whistle signal for his flagman to go back, which he did, going back what he considered to be a sufficient distance, and placing two torpedoes on the rails. He then walked a short distance towards the train and there awaited any trains which might approach.

Train No. BR-5 was running from DeWitt to Rochester, N. Y. It consisted of 66 cars and a caboose, hauled by engine

No. 3649, and was in charge of Conductor Curtis and Engineman O'Brien. This train left DeWitt at 7 p. m. September 14th, and passed block station No. 20 at 1:18 a. m. September 15th, receiving at that point an "end of block system" signal indication, which required the engineman to proceed with caution prepared to stop within his range of vision. His train proceeded to the top of the hill east of East Rochester, and after rounding the curve and reaching the straight track more than one mile distant from the point of collision, Engineman O'Brien saw the distant signal in the caution position, while the two home signals of block station No. 22 were in the stop position. When his engine exploded the two torpedoes he saw the flagman and also the markers of train No. AB-3. He at once applied the emergency brakes, but was unable to prevent the collision. The speed of his train at the time of the collision was between 20 and 25 miles per hour. This occurred at about 1:30 a. m.

The caboose and several cars on the rear end of train No. AB-3 were crushed, while several cars further ahead in this train buckled, as well as several cars behind the engine of train No. DT-3. Several of the derailed cars obstructed adjoining tracks Nos. 1, 2 and 3.

East-bound freight train No. AB-2 was en route from Rochester to Weehawken, N. J. This train consisted of 39 cars and a caboose, hauled by engine No. 3106, and was in charge of Conductor White and Engineman Lark. It left Rochester at 1:20

a. m., passed block station No. 22 at 1:30 a. m., running on track No. 4, and collided with the wreckage on that track at a point about 50 car lengths beyond block station No. 22. Nineteen cars of this train were demolished, while several others were damaged.

Head Brakeman Wolfe of train No. DR-5 was killed in the first collision. It is not known when the two trespassers were killed or on what train they were riding, their bodies being found after the accidents.

This division of the New York Central & Hudson River Railroad is a four track line. Approaching the scene of the accident the track is straight in either direction for more than a mile. There is a slight descending grade for westbound trains which ends about one-half mile east of where the accident occurred. Tracks Nos. 1 and 2, high speed east and west bound tracks are protected by the controlled manual block system. Tracks Nos. 3 and 4, the low speed tracks, are protected by the same system with the exception of a stretch of 7.9 miles commencing at block station No. 20, which is east of Jaynesport, N. Y., and extending west to block station No. 22 at East Rochester. It was in this section that the accident occurred. Trains from either direction are allowed to enter this section with the current of traffic, provided five minutes have elapsed since the passage of the last preceding train. If the weather is foggy or unfavorable the signalman is supposed to secure the permission of the

dispatcher before allowing the second train to enter. At either end of this section is what is known as an "end of block system" signal, which consists of a standard red semaphore mounted on a pole in the usual manner, normally displaying a stop indication. When it is desired to allow a train to pass, the red arm is lowered by the signalman, uncovering a yellow distant semaphore which is permanently fastened in a horizontal position behind the red semaphore. When the latter is in its normal position the yellow semaphore is entirely obscured. The rule requires that trains running on this "end of block system" signal must run with caution prepared to stop within the range of vision.

Engineman O'Brien claimed that two street lights, one located on either side of Lincoln Road Crossing, just to the rear of the rear end of train No. AB-5, prevented him from clearly seeing the markers of that train. To determine the extent to which these lights figured in the accident, and also to determine exactly where Flagman Kanney of train No. AB-5 was standing, a test was made as nearly as possible under the conditions prevailing at the time of the accident. Engineman O'Brien and Flagman Kanney were both present when this test was made. A caboose displaying the proper markers was placed at the point where the caboose of train No. AB-5 stood at the time of the collision, while a flagman was also stationed at the point where Engineman O'Brien claimed Flagman Kanney was located. An engine was then started at the top

of the hill and run toward the caboose. This test was held at about 4. a. m., and a light mist was rising from a nearby creek as upon the morning of the collision. It was found that the caboose could be seen for a distance of about three-fourths of a mile, while the flagman could be seen a distance of half a mile. It was found that the lights did not interfere in any manner with the observation of the markers on the caboose. While this test was being made, Engineman O'Brien pointed out where the flagman was standing. The distance between this point and the caboose was about 750 feet. This statement was corroborated by Crossing Flagman O'Connor, stationed at Lincoln Road Crossing, who was on the ground at the time and had an excellent view of the accident.

Engineman O'Brien, of train No. DR-5, stated that when coming around the curve at the top of the hill he shut off steam and allowed his train to drift along. He thought that there was no train ahead of him, and when he saw the home signals set in the stop position he did not count on stopping his train until his engine reached the signal tower. When his train reached the distant signal he saw the rear end of train No. AB-5. His train was then running at a speed of about 25 miles per hour. He did not see the flagman until this time and thought that the latter was not more than seven or eight car lengths from the rear end of train No. AB-5. As soon as he saw the flagman he answered his signals to stop. His engine ran over the torpedoes at about the time he saw

the flagman. He said the torpedoes were west of the distant signal. The emergency brakes were applied before he ran over the torpedoes. He saw the distant caution signal when he came around the curve but did not see the flagman, saying that at this particular point it is very easy to look over-hand signals. He had never had trouble before, however, in seeing signals. When he saw the distant signal he called it, and was answered by either his fireman or the head brakeman, who was riding in the engine. He said that if the caboose had been east of the crossing he could have seen it. The air brakes on his train were in good working order throughout the trip. He admitted that he was running too fast to stop within his range of vision.

Fireman Cooper, of train No. DR-5, stated that it was a little foggy. He looked out through the gangway but could see nothing. He then put some coal on the fire, at which time his engine ran over the torpedoes. The engineman then applied the emergency air brakes. He did not see the distant signal himself and did not hear the engineman call it to him. The brakeman was on the fireman's seat box. He did not hear the engineman answer the torpedoes or the flag. The distance between the torpedoes and the point of collision seemed to be but a few car lengths. After coming around the curve at the top of the hill he said the whistle was sounded, but did not know at what point.

Flagman Ramsey, of train No. AB-5, stated that the rear end of his train stood about six car lengths beyond the cross-

ing. He went back and placed torpedoes on the rail and then walked in a short distance toward his train. He stated that he placed the torpedoes at the whistling post, which is about 600 feet east of the distant signal, or 1775 feet from the rear end of the train, and that after placing them he took his position at a point a few hundred feet west of the torpedoes. This would have placed him about 1400 feet from the rear of his train. He afterwards said that he went back far enough to enable him to see the whistling post, placing the torpedoes a little west of the same. When the test previously mentioned was made, he pointed out a point some distance east of the whistling post as being the place where the torpedoes were put down. These statements are conflicting. He claimed he was between the distant signal and the whistling post when he was giving the stop signals. When he saw the headlight of train No. DR-5 he did not know whether it was on track 2 or on track 3, but nevertheless started to signal it with his lanterns. After the train had approached 15 or 20 car lengths nearer, his stop signals were answered. He thought the engine was about three-quarters of a mile distant when the engineman answered his signal, and stated that it was about a minute from the time he began to signal train DR-5 until it passed him. He estimated that the speed of the train at this time to have been about 30 miles per hour.

Crossing Flagman O'Connor stated that when train No. AB-5 first stopped he watched the flagman go back, and said he went back about 600 or 800 feet, walking back and forth in

that vicinity. The markers on the rear caboose were burning brightly and when he first saw train No. DR-5, about a mile away, he went to the cabooses and called out, but as no response was made, concluded that they were empty. When train No. DR-5 came along the flagman was between the distant signal and a switch light located about 350 or 400 feet west of the distant signal, and signalled the train from that point. He said that the flagman might have gone down to the whistling post to place the torpedoes, and then have walked back, although he did not see him go that far. He heard the engineman of train No. DR-5 answer the stop signal given by the flagman. He thought he shut off steam and ran over the torpedoes at about the same time. The speed of the train when it passed him was about 25 miles per hour. He said that there was some fog down low and that this made it difficult to tell on what track trains were running when approaching in the distance; he could, however, see distinctly the lights carried by Flagman Ranney who was west of the torpedoes.

Relief Signalman Dunmy boarded train No. Dr-5 at Walworth, a station about 1.5 miles east of East Rochester. Coming into East Rochester, he was riding on top of the train about six car lengths back of the engine. He saw nothing of Flagman Ranney. The engine exploded the torpedoes at a point just west of the distant signal and he at once started for the rear of the train, thinking that there would be a collision, but had not gone far before it occurred. He thought that the speed of the train was about 25 miles per hour when at the

distant signal. The engineman had shut off steam coming down the hill but seemed to use it again when the bottom was reached, but just enough to maintain the speed of the train. Steam was shut off again just before reaching the distant signal and the emergency air brakes were applied just after exploding the torpedoes. He could not see the home signal, and did not know whether this was on account of fog, or smoke and steam from the engine. Train No. RW-3 ran into the wreckage so soon after the first collision occurred that he thought the sound made by it was due to the exploding of the boiler of the engine on train No. DR-5. At Fairport there was considerable fog but coming down the hill into East Rochester it had thinned out. Conductor Curtiss, of train No. DR-5, was riding in the caboose. He stated that there was a short interval between the time when the air brakes were applied and the time of the collision.

Rear Brakeman Loop, of train No. DR-5, stated that when his train stopped he ran east for some distance before looking back, at which time the flagman of train No. AB-5 was near the caboose of train No. DR-5. He was therefore east of the distant signal, as this caboose stood from 30 to 50 car lengths east of the same.

Engineman Myers, of train No. AB-5, stated that he felt hardly any jar from the collision. He had had difficulty in seeing a caboose when coming down the hill toward East Rochester, saying that one could look right over it, not seeing it until nearly at the bottom of the hill. He thought the

lights at the crossing interfered to some extent. On the morning of the accident it was a little foggy or misty in the low or swampy places.

Engineman Bark, of train No. RR-2, stated that when a caboose stood just east of Lincoln Road Crossing it was difficult for approaching west-bound trains to see the markers. The signal lights can be seen clearly on account of being high up, but it is difficult to see markers until close to them. He stated that Engineman O'Brien told him he did not see the flagman or the rear end of train No. DR-5 until he was near the distant signal, and that he at once applied the emergency brakes.

Signalman Calvin, located in tower No. 22, stated that there was no fog except a little over the creek about a train length east of Lincoln Road Crossing. He also stated that Train No. RR-2 passed his tower at about the time train DR-5 ran over the torpedoes.

The records of Engineman O'Brien and Flagman Ranney, the employees chiefly involved, were good, and neither had been on duty in violation of any of the provisions of the hours of service law.

This accident was caused by the failure of Engineman O'Brien of Train No. DR-5 to obey and be governed by rule 810, requiring enginemen to proceed with caution, prepared to stop within the range of vision, when the signal indication "end of block system" is displayed. A contributing cause was the poor judgment exercised by Flagman Ranney, of train No. AB-5, in

determining what was a sufficient distance to insure full protection.

The failure of Flagman Ranney to go back a sufficient distance to insure full protection as required by rule No. 99, is another illustration of the inherent weakness of that rule, a weakness to which particular attention has previously been called, especially in the report dealing with the investigation of the accident which occurred on the Delaware, Lackawanna & Western Railroad on July 4, 1912. In the case here in question the flagman went back what, in his individual judgment, was a sufficient distance. His judgment was wrong, as has often been the case in the past, and a disastrous collision resulted. A rule of this character is not a definite guide to the employees it governs. On many railroads the rules fix the minimum distance which the flagman shall go back, and this is the safer practice. Accidents of this character will continue to occur, however, as long as employees fail to obey and be governed by rules and signal indications intended for the safe operation of trains.