Report of the Chief Inspector of Safety Appliances covering his investigation of a collision on the New York, New Haven & Hartford R. R. at Stonington Junction, Conn., July 25, 1912.

September 23, 1912.

To the Commission:

On July 25, 1912, there was a rear-end collision on the New York, New Haven & Hartford Railroad at Stonington Junetion, Conn., resulting in the death of two employees and the injury of two employees and three persons carried under contract.

This accident was reported by telegraph on the date of its occurrence. After investigation, I beg to submit the following report:

The trains involved in this collision were east-bound freight extra No. 400, running from Midway to Boston, and express train No. 52, running from Harlem River to Boston. The collision occurred on track No. 2 near the tower at Stonington Junction at 6:29 s.m.

Freight extra No. 395, running from Midway to Boston, arrived at Stonington Junction at 3:15 a.m. There the engine became disabled and this train was placed on the elde track. Freight extra No. 400 consisted of engine No. 400, engine No. 307, which was being hauled to Stonington Junetion to take the disabled train forward, and 38 loaded cars and a caboose. At 5:52 g.m. this train passed Mystic, the first block station west of Stonington Junctim, 3.84 miles distant: there a hand signal was received, indicating that a first-class train was following. Extra No. 400 arrived at Stonington Junction at 6:12 a.m., and the towerman displayed eignals directing the train to back into the yard on the south side of the main track at this point. Accordingly the train was soved eastward until its caboose was about 300 feet east of the tower, and it then was backed in on yard track No. 2, stopping with the eaboose clearing Orchard Street crossing. As this track was not long enough to hold all of Extra No. 400 without blocking the crossing, the train was parted shead of the 28th car from the rear end and the section consisting of the two engines and ten care was backing in on track No. 1, at a speed of about 4 miles per hour; when about half of this section of the train was in the side track beyond the fouling point, the west end of the fourth car from engine No. 400 was atruck by express train No. 32.

Express train No. 32 consisted of engine 1004 and thirteen baggage cars, all of the cars being of wooden construction and three of them having steel vestibules. This train arrived at New Haven, Conn., at 4:35 s.m. and there engines were changed and a terminal air brake test was made. It left New Haven at 4:57 s.m., three hours and twelve minutes late, and passed Mystic at 6:24 s.m., arriving at Stopington Junction and colliding with freight extra No. 400 at 6:29 s.m.

The main line of the New York, New Haven & Hartford Reilroad is a four-track road from New York to New Haven, a double track road from New Haven to Readville Transfer, and a four-track road from Readville Transfer to Boston. This collision occurred on the double track road between New Haven and Readville Transfer. Approaching Stonington Junction from the west the track is straight and the distant signal can be seen about half a mile away. East of the passenger station there is a out on the north side of the track about eight feet high, and a curve of three degrees and forty minutes leading toward the north; this surve extends beyond the tower at Stonington Junction but is not so sharp east of the tower. On the north side of the track near the tower there is a cut about fifteen feet high, and on the south side of the track at this point there is a slight fill. The tower is about half a mile east of the passenger station, and Elm Street crossing is between the passenger station and the eastbound distant signal. The grade is practically level.

The controlled manual block system is used on this portion of the New York, New Moven & Martford Mailroad. The eignals are of the normal danger, lower quadrant, semaphore type, and the signals at Stonington Junction are wire connected. The east-bound home signal is located 290 feet west of the tower, and the east-bound distant signal is located 2150 feet farther west. On account of the curvature of the track the distant signal cannot be seen from the tower; and no repeater is used in connection with the distant signal in order that the towerman may know whether or not the signal is operating properly. There is a 24-lever interlocking plant at this point.

Towermen Wilbur stated that at 4:08 on the morning of the accident he found a broken chain in the connection to the east-bound distant signal. He reported this defect to the signal repair man and to the dispatcher, telling the dispatcher that trains would probably be delayed on account of it. The enginemen and conductor of extra No. 395 came into the tower and with their assistance the broken chain was repaired with a piece of insulated wire. He then operated the signal levers as usual, observing the speed of the trains as they approached

the tower for the purpose of finding out whether or not the signal was operating properly. Believing that after the temporary repairs had been made the signal was either working properly or was continually displaying a caution indication, he took no extra precautions for the protection of train movement. But it appears that the signal indicated disar continually, regardless of the position of the levers.

At 6:12 a.m., after extra No. 400 had pulled by the tower the towerman released No. 32 at Mystic and placed the levers in his tower in position to display equation and stoped signals against train No. 32. When extra No. 400 had stopped east of the tower he saw the flagman leave the caboose and start to walk back carrying a red flag. He called to the flagman that No. 32 was about at Mystic, but received no response. The flagman continued to walk back slowly until he was about half way between the east-bound home signal and Sla Street crossing, and then apparently realizing that No. 32 was near he quickened his page.

Engineeun Sartoris of extra No. 400 etated that at Midway and Mystic the signals were clear and white flags were displayed, indicating that his train was running sheed of a first-class train. At Stonington Sumotion signals were displayed directing his train to be side-tracked. Conductor Carroll of Extra No. 390 then case up and they started to back the train in on the siding.

Conductor Carroll of Extra No. 396 stated that when his train was placed on the slding he and the engineer of his truin went up into the tower, and the towerman seked them to help him fix a chain in the connections with the distant eignel. They did so and efterminds returned to the tower: the engineer operated the lever and found that it worked The towerman told them that he had proported the defective signal to the dispetcher and the signal revair man. Four east-bound trains passed, and the towerman operated the levers controlling the distant signal as usual. Then extra No. 400 arrived, and Conductor Carroll went down to assist in backing the train in upon the yard track. told the enginesian what was to be done and then went up on top of the train and repeated signals of the trainmen to the enginemen. As they were backing the engines and first ten cars in on yard track No. 1, the towermen called to his that No. 32 was coming and conductor Carroll gave violent back-up signals to the enginement just before the collision he jumped from the train. Conductor Carroll stated that as they started to back the head end of the train in on the eldstrack he saw the flagsan a short distance way and walking back not very fact. When No. 32 appeared he saw the flamman approximately half way between the east-bound home signal and Elm Street grossing.

Conductor Peterson of Extra No. 400 stated that at the last two towers passed before reaching Stonington Junction hand signals were given indicating that a first-class train was following. He had not said anything to the flagman about stopping at Stonington Junction, but after stopping east of the tower he told the flagman to go back to protect the train, and he saw him start back carrying a red flag. The conductor them helped to back the train in on the side track.

At the coroner's inquest on July 27. Flagman Simpson stated that he had been employed by the New York. New Haven & Martford Railroad Company one week. He had had about five years' experience as a yard brakeman on the Pennsylvania Railroad, but he left the employ of that company in 1908 and eubsequently had not been in railroad service until he was subsequently had not been in railroad service until he was employed by the New York, New Haven & Martford Railroad Company. At the time of his employment he was given an examination only on his hearing and eyeight and was questioned regarding his previous experience. He was given a book of rules but was not examined or instructed on these rules.

He stated that on the morning of the accident as entra
No. 400 approached stanington Junction he and the cenductor
were riding in the cabooss. Then the train had passed the
tower the conductor said they were going to back off there and
he then started back with the flag. He stated he did not know
train No. 32 was following than but thought it had gone. He
stated he had gone back about the distance between twelve
telegraph poles, to a plint around the curve where he could
see straight track, and that the Orain was east of the passenger
station when he flagged it. He first are the train when it
was about the distance between win or eight telegraph poles
away from bim.

Plagman Simpson stated that this was his first trip over this line. He was assigned to duty as a flagman on this run by the trainmaster's clerk; the only question asked was whether on not he had a watch. No instructions were issued to him and he received none from his conductor during the trip. He stated that he went out vithout any knowledge of the operating rules of the company and did not even have a timetable, and that he paid only half a dollar for his watch.

Trainmaster Collins who employs the brokemen on this part of the road stated that he hired Flaguan Simpson on July 18 and he began work on July 19. He had not been given an official examination, merely being questioned about his railroad experience and his femiliarity with the duties of railroad exployes. He worked in the South Boston yard and on the Old Golony Division until he was assigned as a flagmen on this run.

The flagman at Elm street erossing stated that as train No. 38 approached, the distant signal was in the clear position. Extra No. 400 had passed constine before; it came to a stop first with its rear end only a short distance from Elm Street crossing, and at that time the flagman did not get off from the train; it then proceeded, and the flagman thought sufficient timehad clapsed for this train to be placed on the siding and clear of the main track. As train No. 32 was approaching the crossing flagman stated that he saw the flagman of extra No. 400 cons running around the curve and train No. 32 passed him when he was about the distance between four telegraph poles from the crossing, and lust east of the distant signal.

Engineers Mensfield of train No. 32 stated that at Now Mayon a terminal test of the air brakes was ande and they were found in good condition. Approaching Stonington Junction the distant signal was in the clear position. After massing this signal the fireman called out "red flag", and then the home signal in the danger position was seen. The engineers applied the brakes in emergency, but too late to evert the collision.

Conductor Billingham of train No. 38 stated that the speed of that train as it approached Stonington Junction was about 45 miles per hour. Immediately after the collision, the conductor saw the engineess who stated that the distant signal was in the elser position. The flagmen of this train stated that when the brokes were applied he was thrown to the floor of the car, and before he fully regained his feet the collision occurred. He immediately went back and found the distant signal in the clear position.

The primary cause of this collision was the failure of Plagman simpson of the freight train properly to protect his train. Conductor Peterson of extra No. 400 was equally reeponsible, for not knowing that his train was properly protected and for not accertaining whather or not the flagmen was familiar with his duties and giving his proper instructions for protecting the train. A contributing cause was the false clear indication of the distant signal. For this the towersen was resonable as after saking temperary repairs to the broken chain he should have made certain that the signal was varking properly before depending upon 10 to incura the cafety of approaching trains. And the operating officers of the rallroad company are also at fault for placing a san in the respondible position of flagmen with only a oursory examination and without instructions as to his duties. Furthermore, it is noted that two new brakemen, one of whom was totally inexperienced, were assigned to this apew, contrary to instructions issued by the General Sucerintendent recuiring that only one new min be assigned to a crew at a time.

The investigation discloses the fact that the flagman of extra No. 400 had ample time properly to protect his train. Extra No. 400 approached stonington Junction at low speed and stopped before reaching the tower; then it started up and stopped again about 300 feet east of the tower. The flagman did not start back until this second stop, and it appears that he then walked slowly for some distance. Had the flagman dropped off from the train as it approached Stonington Junction, or had he started back as soon as the train atopped the first time, he could easily have gone back for enough to have flagged train No. 32.

The conductor of extra No. 400 knew that a first-class train was following, and also that his train would stop at Stonington Junction for the purpose of selting out locomotive No. 307; but he had not said anything to the flagman about stopping at Stonington Junction and he did not tell the flagman to go back until the train had stopped or was coming to a stop east of the tower.

The towermen found that the distant eignal connections were defective at 4:00 c.m., more than two hours before the collision occurred, and the erew of extra No. 300 was at the tower nearly all that time, but he did not take my staps to learn positively whether or not the signal was operating properly, or to secure the signal in normal position until repaired, as required by the rules. The towermen should have been governed by rule No. 313, which requires that the signal be secured and its user discontinued and that he notify the superintendent. The distant signal at Stonington Junction eculd not be seen from the tower. He signal repeater is need and the towerman had no means of ascertaining whether or not this distant signal was working properly when the temporary repairs had been made excert to go back to a point where he could see the signal, and thus he said he did not have time to do. He operated the levers in the tower to allow four trains to pane, but in none of these movements was he sure of the position of the signal.

Recognizing the fact that it is a deagerous practice to send out two or more inexperienced men in charge of a train, the general superintendent had issued instructions that only one new men should be assigned to a crew at a time. In the crew on extra No. 400, however, there were two new men. The head brakeman had spent two weeks learning his duties, and this was his first trip over this road. Flagman Simpson had had some previous railroad experience, as stated, but he had been employed by the New York. New Mayon & Hartford Railroad loss than a week. During this time he had been employed three days in South Boston Yard, he had made one trip over the Old Colony Division, and this was his first trip between Midway and Boston.

The conductor, enginemen and firemen of train No. 32 setimated the speed of that train to be about 46 miles per hour. The rules of the company restrict the speed of trains while running around the curve and passing over the switches at Stonington Junction to thirty miles per hour. While this excessive speed cannot be attributed in any way as a cause of the speed cannot be attributed in the collision would no doubt have been less disastrous if the speed restriction in effect had been observed.