May 28, 1912.

IN RE INVESTIGATION OF AGGIDENT OF THE INDIANA UNION TRACTION COMPANY'S RAILROAD, MAR. 82, 1912.

On March 23, 1912, there was a head-end collision between two passenger trains on the Indiana Union Traction Company's Railroad near Portville, Indiana, resulting in the death of one employee and the injury of 15 passengers.

This accident was reported by telegraph by the Indiana Union Traction Company on March 22nd, 1912, and after investigation the chief Inspector of Safety Appliances reports as follows:

The Indiana Union Traction is an electric railroad. That portion of the line upon which this accident occurred extends between Indianapolis and Muncis, Indiana, a distance of 56½ siles, and is known as the Anderson Division. It is a single track line operated under the time table and train order system without block signals.

Located at passing sidings and stations are signals which can be electrically set in the danger position by the train dispatcher, constituting what is known as a "dispatcher's block" system. These signals, however, are not block signals, as they are not used for spacing trains but simply to stop trains to permit the dispatcher to notify them that he has orders for them.

Orders are transmitted to train grews by telephone. Zach our is equipped with a portable telephone, cord, hook and duplicate order box, and each depot and sub-station has a permenent telephone booth equipped with an order box in which orders are written in triplicate. It is the custom when a regular train arrives at a meheduled meeting coint, and the opposing train is not in sight, to ask the dispatcher for orders. If an order is to be given it is communicated by the dispatcher to the motorman, who writes the order and repeats it back. The conductor then takes the telephone, repeats the order book to the dispatcher. and gots his O. K. The conductor then tears off the original and the motorman keeps the duplicate until it is fulfilled, after which it is turned in to the office. In the sub-stations and depots the same method is followed with the exception that the order is written in triplicate and one copy is retained in the order box.

This collision occurred between west-bound train No. 60, consisting of combination baggage and passenger car No. 279, in charge of conductor Fulkerson and motorman

Vandevanter, and east-bound train No. 61, concisting of combination baggage and passenger car No. 267, in charge of conductor Premer and motorman Mineer. Train No. 61 is scheduled to leave Indianapolis at 7:08 P.M., and train No. 60 is scheduled to leave Muncie at 6:35 P.M. On the date of the collision these trains left their respective starting points on time. The regular meeting point for these trains is siding No. 18, a place 30 miles west of Muncie and 20 miles east of Indianapolis, where they are scheduled at 7:02 P.M. Train 61 arrived at siding No. 19 at 7:56 P.M., four minutes late, and as train No. 60 was not in sight, the motorman called the dispatcher for orders.

In response to this call order No. 89 was given train 61 by the dispatcher. This order, as written by motorman Winder, reads as follows:

*To Conductor and motorman, train No. 61, car No. 279, at 19.

279, at 19.
Train No. 61, cer No. 279, and train No. 60, car No. 290, will meet at Pendleton.

Conductor Premer, who is the one surviving member of the crew of train 61, stated positively that this order, the criginal of which he had in his possession, was repeated back to the dispatcher by both the motorman and himself exactly as written by the motorman, and the dispatcher's C. K. was given him. The order box containing the duplicate of the order as written by motorman Mincer, was destroyed in the fire following the collision. Pendleton, the meeting woint named in the order, is a station about 10 miles east of siding No. 19. This order was made complete at 7:58 P. M., and train No. 61 immediately proceeded on its way. Two minutes later, at 8:00 P. M., the collision occurred on straight track at a point about 2700 feet east of siding 19 and 12 miles west of Portville station.

At the time of the collision train No. 61 was running about 15 miles an hour. Train No. 60 was running from 25 to 30 miles an hour when the motorman first realized that a collision was imminent, He applied the brakes, and had reduced speed to six or eight miles per hour when the impact occurred. The cars telescoped each other for a distance of about 10 feet, but neither was derailed. After the collision the cars took fire, and the woodwork of both cars was entirely consumed. Motorman Minder of train 61 was caught in the wrockage and burned to death.

Train No. 60 had no orders, but was going to siding No. 19 to meet train No. 61 on its time card rights. The dispatcher's record snows that order No. 89 was given to train No. 61 at siding No. 19 in this form:

"Train No. 61, car No. 279, and train No. extra west. oar No. 296. will meet at Pendleton."

The order in the above form was received by train extra west at siding No. 13, a point about la miles east of Pendleton, at 8:09 P. M.

Dispatcher Knowles stated that the order given to train 61 was a meet order for train extra mest at Pendleton. The order was not given directly by dispatcher Knowles but by dispatcher Lamb, a new man who was at the time being instructed by dispatcher Knowles. Dispatcher Knowles stated, however, that he was sitting by the side of dispatcher Lamb, when order No. 69 was given, and was connected in with the telephone headgear. He stated that he heard the order given and checked it when it was repeated back by the motorman, and he is very positive that the order was issued and repeated back in the form shown on his train sheet. He further stated that after the order was repeated back by the motorman and before the dispatcher's O. K. had been given the dispatcher stated "Train 60 is dowing there", meaning siding No. 19. His statement on this point is as follows:

The only thing I can see in this order in when this order was given "Train 61, 279, and extra west 290 will meet at Pendleton", the dispatcher said at this time, "Train 60 is coming there". Right then they were at their meeting point with 60, when they got this order. And at that time, I don't know, but when that was stated, that 60 was coming there, that this motorman put this down here, but he absolutely repeated me "Axtra west 290 will meet at Pendleton."

- Q. Well, but he didn't receat that to you?
- A. He repeated that order that way.
- Q. To the other man?
- A. To the other man, but I was on the line and heard the whole thing.
- G. You heard him repeat 1t?
- A. Yos. sir.
- Q. so that he didn't use the word 'Sixty' then?
- A. No. sir: he used "Extra west."

Dispatcher Lamb, who gave the order, corroborated the statement of dispatcher Knowles.

Conductor Premer of train 61 is equally positive in his statement that the order was repeated in the form in which it was written by motormen Wincer. His statement on that point is as follows:

- "G. Did you repeat this order back under the rules?
 - A. I did.
 - Q. Did the motorman repeat it back?
 - A. He repeated it first.
 - Q. And you repeated 1t?
 - A. And I repeated it.
 - Q. You complied absolutely with the rule?
 - A. Yes, sir; we both repeated the order.
 - Q. You stated the motorman repeated that before you did?
 - A. Yos, sir.
- Q. So far as you can recollect, in the same terms that you used?
- A. Yes, sir; he wrote the order, all of it.
- 3. The motorman wrote that order?
- A. Yes, air; and repeated it first and handed me the telephone.
- Q. Did you hear him repeat 157
- A. I stood right by the side of him.
- Q. Did he repent it correctly?
- A. Yes, sir; Just as correctly as that reads there.

From siding No. 19, in the direction from which train No. 60 was approaching, the view is unobstructed for a distance of nearly two miles. The electric headlight on train No. 61 was burning brightly, and was seen by the motorman on train No. 60 as his car rounded a curve at Fortville, more than a mile away from the point of collisi m. He supposed that train No. 60 was standing on the siding at the secting point, and did not discover that it was approaching on the main track until too late to avoid the collision.

The electric heedlight on train No. 60 was not burning. It began to burn low and flicter out several miles away from the point of collision, and at Fortville it went out entirely. Had this headlight been burning, the motorman on train No. 61 would have had notice of the approach of train No. 60. Soth conductor fremer of train No. 61 and motorman Vandervander of train No. 60 stated positively that had this headlight been burning the collision would not have cocurred.

This accident was caused by an error in the transmission and writing of train orders between the dispatcher and the conductor and motorman of train No. 61. It is immassible to fix responsibility for the mistake, as the case resolves itself into a question of veracity between the dispatcher and the conductor of train No. 61; although it may be noted that the fact that car Yo. 290, (which was the car number of the extra train) appears in the order held by the conductor of train No. 61 rould seem to corroborate the dispatcher.

The method of transmitting train orders in vogue on this road, and of repeating them back to the dispatcher. is not conducive to sefety, the train numbers being spoken anly, and not down in fugures in the order, without being written out and soelled back to the dispatcher when the order is repeated. It may also be noted that of the 43 meeting points on this line between Indianapolis and Muncle 27 have no time oard names, but are designated merely by The time card shown 44 scheduled daily trains in each direction on that portion of the line where this accident occurred. The movement of this number of trains. (without block signals) wany of which must often be unable to make scheduled meeting points, necessarily implies the issuance of a large number of train orders. In order to avoid mistakee in speaking names of meeting points and train numbers over the telephone they should be spelled out by the dispatcher when giving an order, and should be written in full and spelled out when repeated back by the person receiving the order.

The men involved in this accident were experienced employees with good records. Superintendent of Transportation saldwin stated that he considered them as good men as he had. Of Motorman Winder, who wrote the order in dispute, it was stated that "his per cent on examination was way above the average." At the time of the accident conductor Premer and motorman Winder had been on duty 7 hours and 45 minutes following a period of 15 hours and 15 minutes off duty. Dispatcher incomes had been on duty 8 hours following a period of 15 hours off duty.