

10. Fifteen minutes; 2.02 miles; by the fixed hands of a watch in the conductor's pocket, which stopped at 8h. 40m. P. M.; not heard at Reading.

11. Suppose engine going due north; boiler thrown north-west 249 feet, conductor due north 326 feet, engineer south-east 54 feet, one fireman due north 155 feet, and the other fireman south-west 20 feet; fragments of engine scattered all around the spot of explosion; boiler lay 78 feet due west of track, and its axis about parallel with the rails.

12. The rails of the track on which the engine ran were much spread and deranged; the rails of the opposite track (double track) were broken in two places.

13. Six feet per mile, ascending; straight where engine exploded; her train lay in a curve of 3000 feet radius.

14. The engine was hauling a train of eighty-eight empty coal cars, weighing 211 tons.

15. About 120 pounds per square inch; it did.

16. The brakeman next the engine, 150 feet from her, states that he heard a sudden explosion "like a quarry blast," and that immediately the train stopped, and the cars began to pile, or rise, one over another; he is sure he saw no lightning, or heard no thunder.

17. A train left Reading one hour before the Richmond, and ran from ten to fourteen miles per hour up the road.

18. Answered in No. 16; some farmers in the neighborhood saw the explosion, but saw no lightning, nor heard any thunder; it thundered and lightened considerably before the accident, and but little after it.

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*Depositions of Witnesses taken before the Coroner.*

*Patrick McGuire, sworn.*—I have been on train; saw no lightning, or thunder, at the time of the explosion; felt no shock before the report; Joseph Ward, engineer.

*Matthew Smith, sworn.*—I saw no lightning, or thunder, at the time of explosion; it reported as loud as a cannon.

*J. S. Weber, sworn.*—I live about three-fourths of a mile off from the place; I remarked to my wife they are coming with too much steam; and when the explosion took place it caused darkness; but before it was light by the sparks.

*Daniel Shipp, sworn.*—I was on my porch; I then remarked to my wife the cars are coming; saw no lightning at the time, or thunder, in Alsace township, county of Berks, and am satisfied that it was an explosion of the boiler.

*John W. Powell, sworn, brakeman.*—Left Reading at about eight o'clock; when standing on my post, I saw a flash of lightning and thunder previous to the explosion, but I could very easily distinguish them, or see between the flash and the explosion of the boiler.

*Thomas Cowders, sworn.*—Last evening McCabe requested me to come on as brakeman on the train at about eight o'clock, or quar-

ter after eight o'clock; I was sitting on the car next to the engine; I saw several flashes of lightning and thunder previous to the explosion; she had a great head of steam at the time, and blowing it off; I saw them lying there dead, and often saw Joseph Ward, and that they came to their deaths by the explosion of the boiler of the engine named Richmond.

*Testimony before the Committee.*

On examination by me of witnesses conversant with the circumstances attending the explosion of the Richmond engine, the following statements were given by—

*Mr. Kirk*, foreman of the Reading workshops.—Mr. Ward had complained to him several times, that his pumps worked badly, and had given him much trouble; one pump, if it works well, is, under ordinary circumstances, more than sufficient to supply an engine with water. The storm of the 2d of September, the day on which the Richmond exploded, came from the north-west, and had passed off to the south-east, and almost entirely ceased at Reading when the Richmond left, so much so, that he had laid aside his umbrella, although it still rained slightly. The engine was not blowing off when she arrived, but did not notice if she was, or was not, when she left; was at the depot some time after; heard but little thunder, and but few and indistinct flashes of lightning to the south south-east. From the rails being wet, thinks engine would use about fifteen, or twenty, per cent. more steam than with a dry rail; lower cock about five inches above top of the fire-box; upper tube two inches below.

*T. Loeser*, clerk at depot.—Mr. Ward complained to him on several trips, that his pumps worked badly, and gave him much trouble.

—*Rigg*, assistant clerk.—Was at depot taking account of cars; the rain had almost ceased when Richmond left; Ward had taken off his oil cloth overcoat; heard but very little thunder; took no notice of the state of the steam.

*Philip Abright*, depot hand.—Left the depot soon after the Richmond; as he was going to bed, about twenty minutes after nine, his wife, who was looking out of the window in the direction in which the engine was going, called him to look at a strange light, saying that it did not look like lightning, as it was all in one spot; she heard an explosion before he got to the window; he did not, nor did he see any light.

*Joseph Spayd*, of Reading—Says he is pretty sure that during the whole storm there was no lightning to the north of Reading, and is certain there was none in that direction for some hours previous to and after the explosion; he is sure of it, as he watched it, and took particular notice of it at the time; a few minutes after nine he was standing, together with several other gentlemen, on the steps of Mr. Kendal's hotel, in Reading; he saw a flash of lightning, and heard the thunder; it was far to the south-east; some ten, or twelve, minutes after, heard a report to the north; he, and those standing round, remarked that it was strange, and wondered what it could be, as it did not sound at all like thunder, but the report of a cannon; and that there was no lightning, he is himself certain there was none.