

## APPENDIX No. 27.

## SOUTH DEVON RAILWAY.

*Office of Commissioners of Railways,  
Whitehall, March 30, 1850.*

SIR,

I HAVE to report to you, for the information of the Commissioners of Railways, that in compliance with their instructions of the 8th instant, I proceeded to Plymouth to inquire into the circumstances attending an accident which occurred at that place on the 5th March, but have postponed making this report in consequence of the Engineer-in-chief having expressed a wish to see me relative to the subject before stating my views to the Commissioners; but having now had an opportunity of seeing him, I have to report as follows:—

The South Devon Railway terminates at Plymouth station, the approach to which by the railway is by the descent of an inclination of 1 in 63, rather more than half a mile in length, with a level space between it and the station of 14 chains.

On the morning of the 5th March, a goods-train, consisting of 12 waggons, drawn by a large engine of a new description, having eight wheels, the four front of which are attached to a moveable bogie frame, and the four hind wheels coupled together (the power being applied to the latter), came to the top of the incline at a higher speed than permitted the driver to stop the train before arriving at the station. This was partly caused by the slippery state of the rails, and the result was that the train ran through the station, and through the wall at the end of it. Fortunately there was no impediment in its way before passing through the station, and no person was seriously injured. From the inquiry, it appears to me that the accident demonstrates the necessity and value of the existing arrangements for working the South Devon Railway with the assistance of the electric telegraph, by which no train is permitted to pass the station preceding Plymouth until that station is clear for its reception. It would also appear that, considering the nature of this accident, it would be conducive to safety if all trains were absolutely stopped or brought to a complete stand before commencing the descent of the incline down to the terminal station, so that the drivers would have their trains more under command, and prevent them from acquiring an uncontrollable speed; this, with increased care as to the proportion of the weight of the trains to the number of breaks, will, I trust, prevent a recurrence of a similar misfortune.

The Company are fully aware of the importance of the subject of a sufficiency of the means of stopping trains on their railway, the gradients of which are very heavy, and the engineer has now under consideration a new break, with which experiments are in progress, and which he trusts will be more effectual and certain in its operation than the present breaks.

In the inquiry into this accident, it appeared that the tires are secured to the wheels of the engine in the manner patented by the Haigh Foundry Company, by a dovetailed joint, with soft metal run in between the tire and the rim of the wheel. The break on the engine was applied to the tire of a wheel so secured, and its adhesion to it was so great as to cause the wheel to revolve within the tire, thereby showing a defect in this system of securing the tires, and that it requires the attention of the Company, as well as of the patenters, to provide some additional security against a similar occurrence, which might possibly, in another case, be productive of serious consequences.

I have, &amp;c.,

J. L. A. SIMMONS,  
*Capt. Royal Engineers.*

*Capt. Harness, B.E.,  
&c. &c.*

*Office of Commissioners of Railways,  
Whitehall, April 4, 1850.*

SIR,

I HAVE been directed by the Commissioners of Railways to transmit to you the accompanying extract from my report on the accident which occurred at the Plymouth station, on the South Devon Railway, on the 5th March, and to request you to call the attention of the Directors of the South Devon Railway Company to the remarks contained therein.

I have, &amp;c.,

J. L. A. SIMMONS,  
*Capt. Royal Engineers.*

*The Secretary of the  
South Devon Railway Company.*

## APPENDIX No. 28.

## EAST LANCASHIRE RAILWAY.

*February 4, 1850.*

SIR,

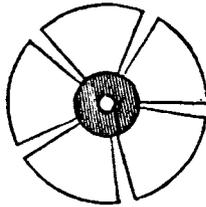
IMMEDIATELY after inquiring into the accident at Hagside, on the East Lancashire Railway, and on which I have just reported, I proceeded to Burscough, on the same line, where an accident occurred on the 21st of January, from the breaking of a tire of a second-class carriage-wheel, whereby two persons were injured,—a lady having had her leg broken, and a gentleman his head bruised and arm crushed.

The train was composed of the engine and tender, one second-class carriage, and two first-class carriages, ranged in the order enumerated; there was no guard's van, and the guard

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was riding inside the second-class carriage. In my report on the late accident on this railway at the Maghull station, I drew the attention of the Commissioners to this, in my opinion, very improper practice, of a guard riding inside a passenger-carriage, for as far as the safety of the public is concerned the train might as well be without a guard. On a line where the passenger-traffic appears to be so small as on this portion of the East Lancashire, it might be unreasonable to expect that to every train there should be a break-van; but the Company ought to take care that their own order, to the effect "that when there is no van attached to a train that there should always be attached a second-class carriage with a break," is attended to.

It appears that about three-quarters of a mile from the place where the train finally upset, the tire of the leading near wheel came off: one portion of it came through the carriage and broke a lady's leg, and though from the track left on the line it appears that the remaining wheels of the carriage were thrown off the rails, yet, from the ground being hard frozen, it offered so little obstruction to the progress of the train that the engine-driver never discovered that there was anything wrong. The guard, from the inside of the carriage, endeavoured ineffectually to make him aware of the accident. From the track left on the line it would appear that for the greater part of the distance (three-quarters of a mile) the broken carriage must have travelled upon the remaining three wheels without falling upon the broken one. The track-mark shows the carriage to have kept generally from about one foot to six inches off the rails, though Mr. Meek, the resident engineer of this part of the line, informed me that near to the spot where the tire broke the carriage was thrown so much off the rails that, if it had not righted again, it would have come in contact with the arch of a bridge under which it immediately afterwards passed. The train was at last brought up by the broken carriage tumbling on its side half way down an embankment about 20 feet high; the succeeding carriage was thrown in advance of it on its side, and partly down the embankment, one of the coupling-chains holding on; the third carriage was thrown on its side still further in advance, but partly across the other line of rails, and was entirely disconnected from the other two carriages; the engine also was disconnected from the carriages, and was thrown off the rails; the tire of the wheel was broken into five parts, and gave at the rivets. I could not detect any flaw in the broken portions of the metal. The inner portion of the wheel was of a construction very generally in use, being formed of portions of bent flat bars, having the central boss cast on to their extremities thus. The wheel was the manufacture of Messrs. Losh, Wilson, and Bell, of Newcastle.



Capt. Harness, R.E.,  
 &c. &c.

I have, &c.,

GEO. WYNNE, Capt. R.E.

SIR,

Office of Commissioners of Railways,  
 Whitehall, February 6, 1850.

I HAVE been directed by the Commissioners of Railways to transmit to you the enclosed extract from Captain Wynne's Report of his examination into the circumstances attending an accident which occurred near Burscough, on the East Lancashire Railway, on the 21st ult., and to request you to call the attention of the Directors of the Company thereto.

I have, &c.,

The Secretary of the  
 East Lancashire Railway Company.

H. D. HARNESS,  
 Capt. Royal Engineers.

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APPENDIX No. 29.

EAST LANCASHIRE RAILWAY.

SIR,

January 12, 1850.

I HAVE the honour to acquaint you, for the information of the Commissioners, that, on the 8th instant, I proceeded to the Maghull station on the East Lancashire Railway, between Preston and Liverpool, to inquire into the accident which occurred there on the 1st instant, caused by a goods-train running over three persons, which caused their death. The coroner's inquest had terminated the day before, when a verdict of manslaughter was recorded against the driver and guard of the goods-train, and both were committed to take their trial.

The circumstances attending the accident were these:—The 7.45 p.m. up-train from Preston arrived at the Maghull station at 8.40, three minutes behind time. The train consisted of but one carriage besides the engine: that carriage had no break, and the guard was riding inside. On arriving at the Maghull station there were a number of passengers to be taken up for whom there was no room; it was therefore necessary to attach another carriage to the train, which carriage was standing in a siding off the down line. I should here observe that the Maghull station is a very small one, and that the entire duties of it are performed by one man, and that it is, moreover, a most unusual thing to have a spare carriage there, or to take up more than two or three passengers; but it being New Year's Day, and the neighbourhood of Maghull, which is but six or seven miles from Liverpool, affording good skating, great numbers went out by the morning trains to enjoy this amusement. The station-master at Liverpool, foreseeing there would be a want of accommodation for those who might remain late, sent down a spare carriage by one of the morning trains, which was left in the down