RAILWAY ACCIDENT (FALMER STATION).

RETURN to an Order of the Honourable The House of Commons,
dated 16 June 1851 —for,

COPY "of the Report of the Officer appointed by the Commissioners of Railways, to inquire into the Circumstances attending a Fatal Accident which occurred by a Train of the London, Brighton, and South Coast Railway Company running off the Line near the Falmer Station, on the Brighton and Lewes Railway, on the 6th day of June 1851."

Office of Commissioners of Railways, Whitehall,
16 June 1851.

Sir,

I have the honour to report to you, for the information of the Commissioners, the result of my inquiry into the circumstances attending a fatal accident which occurred on the afternoon of the 6th instant, upon the London, Brighton and South Coast Railway, in consequence of a train being thrown off the line between Brighton and Lewes.

The branch line from Brighton to Lewes is eight miles in length; there is but one intermediate station, called Falmer, situated as nearly as possible halfway, from which the line descends towards Lewes, for a distance of 314 miles, at a gradient of 1 in 63, which is succeeded by a short length of level line leading to the Lewes Junction. The Company's regulations direct that all engines should go down the descending gradient from Falmer with the steam shut off; and they further direct that the speed should not be allowed at any part of the descent to exceed 20 miles an hour. The practice, however, of the engine-drivers upon the Lewes branch appears hitherto to have been to shut off steam on leaving the Falmer station, and then to allow the trains to run down unchecked till it became necessary to apply the breaks on approaching the junction at Lewes. From an experiment tried on the spot, it appears that the speed of trains so conducted varies from 10 or 15 miles an hour at the head of the incline, to 50 miles an hour at the point where it is usual to apply the breaks.

Midway in the descent, or about 1½ miles from the Falmer station, the line swoops round to the left on a somewhat sharp curve through a deep chalk cutting, the upright side of which prevents a driver, conducting a train towards Lewes, from seeing the rails in front to a greater distance than 200 yards. This is a point which should be passed at a moderate speed. The ordinary trains on the Lewes branch, even if running at no higher speed than 20 miles an hour, could not always be stopped within 200 yards upon so steep a gradient; and from the experiment above alluded to, it appears that the usual speed of those trains at this point is not less than 27 miles an hour. Engine-drivers are seldom good judges of the speed at which they are running; they generally under-rate it; and when the steam is shut off, the smoothness of the motion and the absence of the beat of the engine are apt to deceive them.

On Friday the 6th instant, a train consisting of four carriages, one first-class, second, and one third-class, drawn by an engine with the tender foremost, left the Brighton station for Lewes at 5 minutes past 12; it stopped at the Falmer station, and then proceeded to run down the incline as the driver had been accustomed to do, with the steam shut off, but without any breaks being applied. It swept round the curve already described at a speed which was certainly not less than 27 miles an hour, and at the end of the curved cutting came in contact with a wooden sleeper, the end of which rested upon the left-hand rail; this threw A 416.
threw the train off the line to the opposite or right-hand side, and the centrifugal force, due to the combined effect of the speed and the curve, tending in the same direction, the train ran onwards, taking an oblique path, crossed the opposite line of rails, and, about 85 yards from where it had left its own line, came in contact with the parapet-wall of a bridge which carried the railway over a public road. The parapet-wall was swept away, and the tender, the engine, and two of the carriages fell over into the road; the other two carriages had fortunately become detached when the train crossed the opposite line. Of the two carriages which fell into the road, one was a second-class in which there were no passengers; the other was a third-class, and there were in it four passengers, three of whom were killed; the fireman of the train was killed on the spot, and the driver so seriously injured that he only survived 48 hours.

The wooden sleeper which threw the train off the rails, was one of three spare sleepers which had been placed at that part of the line about two months previous to the accident, for the convenience of the plate-layers when they required a new sleeper for the repair of the permanent way. The three had been stacked one above the other on the north side of the line, about 5 feet from the outer rail. These sleepers are 9 feet long, 10 inches wide, and 5 inches thick; one of the three, happening to be a half-round baulk, was placed above the others with the rounded side uppermost. It appears that a short time previous to the arrival of this train at the spot, one end of the half-round baulk must have been lifted up and pulled round till it rested upon the outside rail, while the other end was left bearing upon the other two sleepers.

The three sleepers had been seen in their proper places at 8 o'clock that morning by a plate-layer who examined that part of the line; and a train which left Brighton at a quarter past 11, had passed the spot without finding any obstruction in the way. After that, to the time of the accident, there were none of the servants of the Company within sight of the spot; three plate-layers were at work about a quarter of a mile off, but they were hid from view by the curve of the cliff cutting.

On reviewing all the evidence bearing upon the subject of this inquiry, it seems evident that the immediate cause of the disaster was the circumstance of a sleeper being left resting upon one of the rails; and that the act of placing the sleeper in that position cannot be attributed to any of the Company's servants. It is evident, also, that the Company's servants cannot, by any practicable exercise of vigilance, prevent persons mischievously disposed and watching for an opportunity, from getting unseen upon the line; but it is equally clear, that undue facilities for mischief are afforded to such trespassers by the practice of leaving sleepers in secluded spots in such close proximity to the rails; and, independent of this, there is a strong probability, that the traffic on the Lewes branch had been conducted with a proper regard to public safety, the wanton act of placing a sleeper on the rail would not have been followed by the fatal consequences which actually ensued. It is quite clear that the train, when it met with the obstruction, was running at a speed which was imprudent at that spot; and it is equally clear, that the circumstance of the engine running tender foremost had a most important influence on the result.

The practice of running engines with the tender foremost is most objectionable. When the engine is in that position, it is impossible for the driver, without neglecting his other duties, to keep a proper look out upon the road in front; and when the engine attains even a moderate speed, the fine dust blown off from the coke renders this necessary duty extremely difficult of performance. Engines, also, are specially constructed to run in one position, namely, with the chimney end in front, and the weight is so distributed on the wheels as to ensure the utmost attainable degree of steadiness while running in that position. The engine which drew this train, the weight upon what should have been the leading wheels was more than double that on the trailing wheels, and that arrangement, from being an additional security, became a positive source of danger when the engine came to run at a high speed with the lightly weighted wheels in front. In addition to this, it is to be remembered that the engine, when running in its proper position, affords, by its great weight as compared with the tender, a much greater security against the train being thrown off the line; besides which, it is nearly certain, that had the engine in this instance been in front,
It appears that for some time past it has been the practice upon the London, Brighton and South Coast Railway, to run all the short trains, whether on the main line or on the branches, without turning the engines; and that, therefore, either on the out or on the return journey, the engines must travel tender foremost. In the present instance there were turn-tables both at Brighton and at Lewes, and there was therefore no necessity for having recourse to such a dangerous practice. The principal reason alleged by the Secretary and the Locomotive Superintendent to justify the proceeding was the desire to save time, and thus conduct the short-train traffic with fewer engines. The Chairman, however, of the London, Brighton and South Coast Railway Company, in the evidence given by him before the coroner at the inquest held at Lewes on the 14th, endeavoured to support the practice of running engines with the tender foremost on other grounds. I append a certified copy of the chairman's evidence, which the coroner has been good enough to send to me. It will be seen that Mr. Laing stated, that he was Chairman of the Board of Directors of the London, Brighton and South Coast Railway Company, and that he was previously Secretary to the Railway Department of the Board of Trade for several years; that it was then his duty to receive reports from the different railway companies as to accidents occurring on their lines, and to classify them, and report them to Parliament every Session; that he has along been a very general custom to run short trains tender foremost; that millions of miles have been run tender foremost, and that he does not recollect any case of accident arising from that circumstance. In giving this evidence, the recollection of the Chairman of the London, Brighton and South Coast Railway must have failed him as regards his experience when Secretary to the Railway Department of the Board of Trade. On that subject I beg to call the attention of the Commissioners to the Report of the officers of the Railway Department for the year 1841, when Mr. Laing was secretary. It will be seen that in that year a circular bearing Mr. Laing's signature was sent to all the railway companies, and that the replies to that circular called forth the following remark in the Annual Report:

"Another result which appears from the returns in the Appendix is, that the practice of running tender foremost is universally pronounced to be dangerous, and that a very general opinion is pronounced against propelling trains by an engine from behind when it can be avoided. These opinions are entirely conformable to the recommendations frequently made by the Inspector-general in his reports, and urged by this department, and it is believed that the practice of running tender foremost with passenger-trains is now almost entirely discontinued, and that the practice of propelling passenger-trains from behind is rarely resorted to."

Among other letters also referring to this subject, which will be found in the Appendix to the same Report, I beg to quote one at length, inasmuch as it was specially addressed to the London and Brighton Railway Company.

"Letter sent to the London and Brighton Railway Company, with a copy of a Memorandum from Sir F. Smith, relative to the working of the Shoreham Branch.

"Sir,

"I am directed, &c. to subjoin a copy of a memorandum which has been addressed to their Lordships by Lieut.-Colonel Sir F. Smith, relative to the working of the Shoreham Branch of the London and Brighton Railway, and to request that you will call the attention of the Directors to the propriety of adopting the recommendation therein contained, which appears to their Lordships very important to the public safety.

"It appears that in consequence of there being no turn-table for the engine at the Shoreham terminus, it is the practice to run the trains from Shoreham to Brighton with the tender foremost.

"The accident which occurred from this cause on the 3d June last on the Sheffield and Rotherham Railway, and which was attended with such fatal con-sequences,
REPORT relative to the ACCIDENT NEAR THE PALMER STATION,
sequences, has sufficiently proved, if any proof were necessary, the danger of this practice. It therefore seems expedient that the Lords of the Council should recommend to the Directors of the Brighton Railway to discontinue it.

"I am, &c.
"The Secretary of the
"London and Brighton Railway Company."

To this letter a reply was sent by the Secretary of the London and Brighton Railway Company, stating that the letter had been laid before the Directors, and that he, the Secretary, was instructed to say, that the recommendation to discontinue the practice of running the tender foremost on the Shoreham Branch should meet with immediate attention.

I would recommend that this dangerous practice be finally discontinued upon the London, Brighton and South Coast Railway, and that the Directors allow no mistaken view of leading to lend them again to expose the public to such unnecessary risk. I would also recommend that steps be taken to compel the engine-drivers upon the Lewes Branch to comply with the Company’s regulations as to the speed of their trains in descending the Palmer incline, and particularly that they should use great caution in passing through the curved chalk cutting. I would further suggest that the practice of leaving sleepers and other materials in close proximity to the rails at places where the Company’s servants cannot keep watch over them, should at once be discontinued.

I have, &c.

Captain Simmons, R.E.
&c. &c. &c.

(signed) R. M. Laing.
Captain, R.E.

IN RE Accident on Lewes and Brighton Railway. Copy Evidence given by Mr. Laing.

Samuel Laing, upon his oath, saith,—I am Chairman of the Board of Directors of the London, Brighton and South Coast Railway Company; I have been nearly three years; I was previously Secretary to the Railway Department of the Board of Trade for several years; it was then my duty to receive reports from the different railway companies as to accidents occurring on them, and to classify them and report them to Parliament every Session. It has all along been a very general custom to run short trains tender foremost; I could mention a number of instances; the Greenwich Company, the South Eastern Company, the North Kent, the Eastern Counties, the South Western, the Liverpool and Manchester, and Manchester and Leeds. I should think it would be difficult to find any line on which some of the trains did not run tender foremost; it is generally confined to short distances; it is more expensive than running engines foremost, there being a greater consumption of coke. I know instances where trains run tenders foremost down very steep inclines; the tender is generally separate from the engine, which is coupled to the latter. It has certainly never occurred to me that there was any great danger in running tender foremost; I have known many instances of obstructions, such as horses and pieces of wood; millions of miles have been run tender foremost, and I do not recollect any case of accident arising from that circumstance. In consequence of a representation made about a year and a half ago by Mr. Godlee to the station-master at Brighton, of the excessive speed between Lewes and Brighton, instructions were given to the engine-drivers to regulate the speed. If there had been a guard first in front of the train, it might have given a chance of escaping the late accident, though perhaps a remote one. In the case of a heavy body like a sleeper, the guard would have probably stuck into it, and have been either broken or bent, or have lifted up the engine, in which case the wheels would have gone over the sleeper. The blow given might be partly horizontally and partly perpendicularly; the opinion of practical men is, that guards are not of much use; they were first used to remove stones and things of that kind. The only difficulty in having a lock-up for the sleepers is, that the men ought not to have to go far when a sleeper is discovered to be rotten to supply its place. We have three tank engines now at work on the
the line; they are constructed to run either way, or at any rate they have guards at each end. I travelled over the line on the day of, and before the accident, by the 11. 15. train. I rode on the engine; the line was in excellent order; we passed the waggon-train on that day somewhere between Falmer and the scene of the accident; I observed three men working on the line, nearer Falmer than the scene of the accident; I do not consider that there is any great danger in travelling in a carriage next the engine. I tried an experiment on the line with Captain Laffan, the Government inspector, on Monday last; we started the train from the Falmer station, kept the steam on until the engine had attained a moderate rate of speed, and then shut off the steam and let the train run down the incline to Lewes without any break, to ascertain what speed it would attain by the action of gravity down the incline. The speed at the place where the accident happened, as timed by Captain Laffan and myself, was between 27 and 28 miles an hour. There were three carriages attached to the train, containing about 20 persons. The speed when we started from Falmer, and the steam was shut off, was about 20 miles an hour; we started from Brighton the same as in any other train; the experiment was conducted under the direction of Captain Laffan; the engine was of an average size; the whole rate of speed from Falmer to Lewes was about 32 miles an hour; I have often seen the train pass on the Lewes line whilst walking on that line; I have never witnessed any improper speed.

(signed) S. Laing.

Taken and sworn before me,

(signed) F. Harding Gell, Coroner.

I certify the foregoing to be a correct copy of the evidence given by Mr. Laing.

(signed) F. Harding Gell, Coroner.

15 June 1851.