they might have been turning the tap. Now it is surmised, that in consequence of the lights being put out in this manner, many of the taps were not turned off, and as a consequence, the gas pipes would gradually become filled with atmospheric air during the day; and when the lamps were lit in the evening, this atmospheric air would have to be gradually expelled by the pressure of gas; and it might therefore readily happen, where there were, as in this case, a large number of lights burning, that a lamp after consuming gas for a considerable time, might have atmospheric air driven into the pipe, from some collateral pipe, and when the gas in front of it was all expelled, the light would go out. That this is the true explanation to be given to the fact of the lights not burning, may be gathered from the circumstances that after the collision occurred, fresh instructions were given not to put out the lights by means of the stop cock; and there has been no trouble in making the gas lamps burn since that time, and the same cause affords an explanation how it was that the guard had difficulty in lighting the lamp at the distant signal after the collision occurred; and I think he was in all probability mistaken in supposing that the gas was turned off, but that air and not gas was issuing from the orifice when he first tried to light it.

The collision was evidently occasioned by the gross negligence of the driver of the 10.15 P.M. down passenger and goods train, in not having immediately taken steps to stop his train as soon as he ascertained that there was no signal exhibited at the down distant signal, especially as he could not see the junction signal light which would be visible from the same spot: but I am sorry to be obliged to state that this accident brings forward additional evidence that there is great laxity of discipline on the line. In making this statement, I am assuming, that the directors and managing officers of the Lancashire and Yorkshire Railway Company in issuing printed books of regulations, wish them to be observed. If they have no such wish, the sooner these printed regulations are thrown away the better.

The company's regulations prescribe that engine drivers are not to pass danger signals, but to stop; and as regards distant signals, to draw inside of them after stopping. The drivers of the up excursion and down passenger and goods trains both disobeyed this regulation, as the absence of a light at the down distant signal must be regarded as tantamount to the exhibition of a danger signal, and the driver of the down train also passed the junction signal whilst it stood at danger, or the collision would not have occurred.

Again, rule 9, page 70, states, "In case of trains on "both lines approaching the point of junction at the "same time, the *main line trains* are to have the "*right of road*, and the other trains must be stopped "until such main line trains have passed. If the "other trains have to follow the trains on the main "line, or *vice versâ* past the point of junction, an "interval of *five minutes* must elapse previous to "their being allowed to do so, and then great caution "and the general regulations as to distance must be "observed." Now, in the teeth of this rule, the up excursion train was permitted by the signalman at the junction to follow the up goods train without any delay. I do not say that the rule is a good one, but it is to be found in nearly all the books of regulations that have come before me; and I believe I may say that it is very generally disobeyed on all railways, and the interval of 5 minutes between following trains at stations and junctions is not preserved.

Again, engine drivers are directed to report anything unusual they may have observed in going along the line. Now an engine driver of a down train along the main line, which had preceded the 10.15 P.M. down passenger and goods train that night, had observed that the light at the down distant signal was not burning as he passed. If he had done his duty to his employers and to the public, he should have stopped his train at Blue Pitts station, and have told the station master of the fact. His neglect in doing so might have been attended with very serious results. But he mentioned the circumstances at Sowerby Bridge some hours after, when he heard that a collision had taken place, as an excuse for the accident. I have also to call attention to the fact, that the up excursion train was run with one ordinary break to 21 other carriages. I do not say that the insufficiency of break power had any thing to do with causing this collision, but it is another exemplification of the reckless way in which the lives of the public are risked; and the company appear to take more care of goods than they do of human beings, as the down goods train had only 10 loaded waggons, and 1 passenger carriage as far as Rochdale, and yet it was provided with 2 guards, and 2 guards' break vans.

I have, &c.
W. YOLLAND,
Colonel, Royal Engineers.

The Secretary to the Railway Department, Board of Trade.

LANCASHIRE AND YORKSHIRE RAILWAY.

Railway Department, Board of Trade,
Whitehall, October 10th, 1860.

SIR,

I AM directed by the Lords of the Committee of Privy Council for Trade to transmit to you, for the careful consideration of the directors of the Lancashire and Yorkshire Railway Company, the enclosed copy of the report made by Colonel Yolland, R.E., the officer appointed by their lordships to inquire into the circumstances connected with the accident which occurred at the Helmshore Station, on the 4th September.

I am, &c.
JAMES BOOTH.

The Secretary to the Lancashire and Yorkshire, Railway Company.

Railway Department, Board of Trade,
Whitehall, October 3rd, 1860.

SIR,

I HAVE the honor to report for the information of the Lords of the Committee of Privy Council for Trade that in compliance with your minute of the 5th ultimo, I have inquired into the circumstances which attended the collision that happened on the early morning of the 4th September close to Helmshore station on the East Lancashire section of the Lancashire and Yorkshire Railway, between two excursion trains, when 10 persons were killed, and 1 has since died of the injuries then received; 4 have had their thighs fractured, 2 have had both legs, and 12 one leg fractured, 10 have had ribs or arms fractured, knees or clavicles dislocated, joint ligaments lacerated, or received concussions of the brain, while 49 others have received bruises and contusions.

Helmshore station is situated seven miles north of Bury about half-way up an incline of six miles in length, extending from Ramsbottam to Baxenden, whence the line falls by a steeper incline (1 in 39) past Accrington. At Helmshore, there is an incline of 1 in 100 for a length of 150 yards on which the station stands, but above and below the station, the incline is one in 78. Forty yards north of the south end of the incline of one in 100, the railway is crossed on the level by a public road, and the station buildings and platforms are constructed north of this level crossing.

According to the printed notice of special trains on

the East Lancashire section of the Lancashire and Yorkshire Railway dated the 30th August, the Railway Company proposed to run four excursion trains on the 3rd September from Colne ; two to Blackpool, one to Liverpool, and one to Manchester (Salford station), and the train for Manchester was put on, at the request of Mr. Jennison the proprietor of the Bellevue gardens, near Manchester, and hence it was called the Bellevue train. The notice names 1000 as the probable number of persons who might be expected to travel by the Bellevue train, and the Superintendent of the line (Mr. Shaw) accordingly provided a train of 24 carriages with one engine and two guards, for the accommodation of the passengers he expected for Bellevue. This train, No. 1, was appointed to leave Colne at 9h. 15m. A.M. and to call at all stations between Colne and Ratcliffe bridge to take up passengers. It left at 9h. 45m. A.M. and before its arrival at Burnley, the superintendent at Accrington received the following telegraphic message from the Burnley station-master :—" Bellevue train not " arrived ; 350 passengers here, and great deal at " Barracks and many hundreds at Nelson. Send an " engine with all carriages you can ". On receiving it, the superintendent sent an engine with 18 carriages which formed No. 2 train. He then received a second message from Burnley before No. 2 train arrived at Accrington and after No. 1 train had come in, to the following effect :—" Burnley is clear, but " carriages all full ; Burnley Barracks, Rosegrove, " and Huncoats cannot be taken on ; send carriages ". The superintendent, however, subsequently found that the two trains had cleared the line as far as Accrington, where there were 400 passengers booked for Bellevue, and these also were sent on by these trains, which were then quite full. Just before No. 2 train of 18 carriages got away from Accrington, a telegram was received from Haslingdon " about 400 " for Bellevue, send plenty of carriages ", and the superintendent then made up and despatched a third train from Accrington of 23 carriages, which number was subsequently increased to 31 by the addition of eight carriages at Ramsbottom station. The accident happened to a portion of this train on its return journey from Manchester.

Each train was provided with two guards, and each was assisted up the incline at Accrington by the regular bank engine, but each was taken on to Manchester by one engine ; these three trains arrived at Manchester without mishap of any kind, the last at 1 PM.

The number of persons who took tickets for the Bellevue train at the various stations was as follows :—

Colne	334
Nelson	239
Brierfield	39
Burnley	352
Burnley Barracks	49
Rose Grove	146
Huncoat	23
Accrington	402
Baxenden	23
Haslingden	330
Helmshore	63
Ramsbottom	319
Bury	89
Radcliffe	45
Making up a total of	2453 persons.

In the course of the day, the superintendent arranged with the locomotive superintendent to have two additional engines to assist in taking the three trains back at night ; and with the station-master at Manchester, that No. 2 train which had consisted of 18 carriages in the morning, should be reduced to 14 and be taken on by one engine. This was the first train despatched from Manchester at night, viz. :—at 10h. 45m. PM., and by the guards written report it appears that only 13 carriages were taken, which is about the maximum load for a passenger engine up the incline. This train arrived safely at Accrington, having left Helmshore at 11h. 57m. PM.

The next train, No. 2, which was despatched from Manchester, was the last which had arrived there from Accrington in the morning. No alteration was made in the number of the carriages, and it left at 11h. 10m. P.M. *drawn* by two engines, and in charge of two guards, both of considerable experience in working trains up and down the inclines. It was furnished with four second class carriages which had ordinary breaks on them worked from the roof, but as only two guards were sent, two of these breaks were useless as far as the servants of the Railway Company were concerned. There was no guards' break van at the tail of this train—which is supposed to have contained 1,000 persons.

The last of these excursion trains from Manchester for Colne, No. 3, was the first which had arrived at Manchester in the morning, and ultimately it left with the same number of carriages, 24, as it had in the morning, although at one time it was intended to have increased the number to 28.

The Superintendent and one of his Inspectors went voluntarily to Manchester for the purpose of conducting these trains back from Manchester. The Superintendent saw the first train off, accompanied the second himself at 11h. 10m. P.M., and the inspector followed in the third at 11h. 31m. P.M. which last train was in charge of two guards, one working an ordinary break, and the other a set of Newall's Patent breaks, consisting of break van and two carriages continuously coupled together. It was drawn by two engines as far as Ramsbottom Station, the foot of the long incline, but the leading engine was there taken off and directed to *follow* and *push* on the train from behind—which direction was obeyed.

Thus it may be asserted that, according to the very general practice which prevails, no excursion trains could have left Manchester under better auspices than the Bellevue trains. They had safely accomplished the journey in the morning up a steeper incline, with the same weight and number of carriages, without anything whatever going wrong ; and when they left at night, the superintendent travelled with No. 2, and his inspector with No. 3 train.

As No. 2 train approached Winser Bridge one mile from Manchester, the signals stood at danger, and the steam of both engines was shut off, and the speed slackened—but, in going ahead again, after the danger signals had been taken off, the draw bar of one of the carriages came out, owing to the breakage of a cotter, and the hook of a draw-bar of a carriage next to the tender also broke,—the train was stopped, but the superintendent was only made aware at the time of the breakage of the cotter, and the two carriages were fastened together by the side chains only, the buffers being compressed for the purpose of enabling the carriages to be coupled up tight. The tender was secured to the first carriage by another shackle. When the train reached Ramsbottom Station, the superintendent directed that the passengers should get out of the carriage which had had the cotter of a draw-bar broken, and that the carriage should be taken off. This left the train composed of 30 carriages. One guard, Tomlinson, rode on the top of a carriage fitted with a break, which carriage was the fourth from the tail of the train—and the other, guard Chippendale's break carriage, was situated about the fifth from the engine. This train is said to have left Ramsbottom at 12h. 16m. AM., and the guards were aware that No. 3 train was close to them, as they saw it, and knew that it was kept out of the station by the signals, until they left.

No. 2 train stopped next at Helmshore Station at about 12h. 30m. A.M., and as soon as it stopped, the guards say that they got down from the break-carriages to attend to the passengers, after releasing their breaks in accordance with the ordinary practice. The superintendent states, that after the train came to a stand, he felt a rebound of the carriages, a slight shock, and then he heard something snap. He was in a carriage

about 10 from the engine, and on looking out, he saw the guard Chippendale who told him that he thought a portion of the train had broken loose, and thereupon he jumped out of the carriage, went to the leading engine, got it detached and started with it, as quick as possible, on the up line, to endeavour to get ahead of the run away carriages, and to turn them off from the down line by a cross-over road, at some distance from the station: or, if that was not practicable, to run forward and give notice to the driver of No. 3 train, that some carriages had run backwards down the incline. But it was too late, the collision had taken place before the descending carriages were overtaken by this engine.

The guard Tomlinson, who rode on the fourth carriage from the tail of the train, as already mentioned, informed me "that No. 2 train came up to Helmshore " Station very nicely and slowly; that he just allowed " the break blocks to rub against the wheels, and " that was all; that his break-carriage stopped five " or six carriage lengths on the Ramsbottom side of " the level crossing"—so that three or four carriages would be standing on the incline of one in 78, while the remainder of those which broke away would be on the incline of one in 100. He also stated that " as soon as the train stopped he released his break, " got down and walked to the platform and called out " 'Helmshore' some few times; that the train had " been standing about a minute, and they were just " about to start, as he saw some of the doors of the " carriages shut, and heard the other guard call out " 'Helmshore' when he heard a coupling snap and " the carriages moved backwards; that he was " standing on the Ramsbottom side of the carriage " whose coupling snapped, and he ran back to his " break-carriage, as quick as he could, and got on the " carriage and put on his break; that he thinks the " train could not have gone many yards when he got " on the carriage and applied his break, and he thinks " it could not have got half-way to the first over- " bridge (146 yards from the centre of the platform) " when he applied his break, and that the wheels " were skidded as he passed under this bridge, but " the rails were rather wet with the dew, and slip- " pery; that he stuck to his break as hard as he " could, as they went down the incline, and he thinks " the speed increased very little after he got his " break on, and that they were running five or six " miles an hour when the carriages struck the engine " of No. 3 train; that just before the collision " occurred he jumped off and lit upon his feet, and " then fell on his head, and his lamp was put out, so " that he was left in darkness".

I see nothing whatever that appears at all doubtful in this man's statement, except as regards the position of the runaway carriages down the incline, when he succeeded in applying his break—and he may well have been mistaken in the darkness of night, and on such an occasion.

The collision between the descending carriages, 17 in number, and the ascending No. 3 train took place at 654 yards from Helmshore. At that part the line is in deep cutting, and there is a sharp curve, so that the view in front of No. 3 train would be little more than 100 yards—and the driver of No. 3 train says, he had only time to shut off his steam, sound the whistle for the breaks, and reverse his engine, while the inspector who rode on the engine, and was the first person to see the side lights of the descending train, ran to the tender break and applied it, before the shock took place. The driver says that he was running about 13 or 14 miles an hour, when he first saw the descending carriages approaching, and thought they might be 30 yards off when he first saw them. The speed at which the descending carriages travelled is uncertain. It was given in evidence at the coroner's inquest, that when the carriages first began to run backwards some of the passengers in one of the compartments of a carriage got out, while others remained in it. Also that a man named Ashworth got out and walked forward upon the tops of the carriages until he reached one with a break, which he states he put on, but the general testimony is to the effect, that although the speed of the descending carriages at first was very moderate, it gradually increased up to the time when the collision occurred. Another passenger deposed to some person being at the break on the fourth carriage from the tail of the train as it was descending—inasmuch as he spoke to him, but received no answer, just before the collision happened.

According to the written reports made by the guards, No. 2 train left Ramsbottom for Helmshore at 12h. 16m. A.M., and No. 3 train at 12h. 28m. A.M., exhibiting an interval of time of 12 minutes. The station master at Ramsbottom makes the interval 15 minutes, and the inspector, who rode on the leading engine of the third train, thinks it was 12 or 14 minutes. If that be anything like the interval of time, it is clear that No. 3 train must have travelled much faster up the incline than No. 2, and thus lessened the interval of time.

The effect of the collision on the descending carriages was, I am informed, such, that the first or that at the tail of the train was broken all to bits; the second was scarcely at all damaged but lying on its side up the slope of the cutting; the third was lying on its side, broken all to pieces on the west side of the line; the fourth had the under frame slightly damaged, —the break blocks on this carriage were fast to the wheels at 3 A.M., and the catch of the ratchet wheel was in; the fifth was on the line, not damaged; the sixth had its body slightly shifted from the frame; the seventh was not damaged; the eighth had the panels of the end next Ramsbotton partly pulled out, and the body had shifted on the frame; the ninth and tenth had the under frames slightly damaged, and No. 9, rested partly on No 10, the remaining carriages were not damaged.

Of No. 3 train, the leading engine was knocked off the rails, all six wheels, and the trailing wheels also of the tender. Both of the buffers of the engine, and one buffer of the tender were broken—the smoke box front was slightly knocked in, and the right hand clack box on the boiler was knocked off, and the safety valve levers and the spring balances were damaged. The corner of the tank on the tender was knocked off behind, and the tank slightly damaged at the sides. The tops also of two carriages of No. 3. train were knocked off and thrown forward on to the top of the tender, which would render it probable that No. 3 train was travelling as fast as it could when it was so suddenly met by the descending carriages; and the inspector informed me, that he did not think the steps they were enabled to take prior to the collision, had at all reduced the speed at which they were going.

I have already stated, generally, the sad results of this accident as regards the loss of life and injuries to persons, and I enclose a list of the sufferers supplied to me by the Railway Company.

I examined the link of the screw coupling, and the bracket and links of two side chains which were shown to me as those that broke on the arrival of the train at Helmshore. The coupling link belonged to an East Lancashire carriage—but the bracket and link which formed parts of two side chains, were attached to and suspended from one end of a Birkenhead Railway carriage, one of ten which had been lent to the Lancashire and Yorkshire Railway Company for these excursion trains—and they are stated to have formed part of the Company's regular stock, and to have been in use for ordinary and excursion trains on the Birkenhead Railway. The quality of the iron of the coupling link was good—and its diameter about $\frac{3}{4}$ of an inch—but that of the iron in the side chains was not so good, and exhibited in the case of the link the appearance of an old fracture, and in the case of the bracket a peculiar weld, the quality of the iron not being very good. It was stated in evidence that the carriages were all examined before they were used for this ex-

cursion train, and also, that all the carriages were properly coupled together with screw couplings and side chains, when the train left Ramsbottom Station.

I should state, as the general result of my inquiry, that it appears the accident was not occasioned by misconduct or neglect on the part of any officer or servant of the Lancashire and Yorkshire Railway Company; but that it was the result of an objectionable mode of working excursion trains, not confined to this particular Railway, combined with the absence of specific precautions calculated to provide for the safety of the public while travelling over steep inclines. For it is evident:

1. That the accident would not have occurred at all, except for the fracture of the coupling and side chains; and these fractures were the necessary results of making up the train with the large numbers of carriages (30) of which No. 2 excursion train was composed, covering, with the two engines, a length of about 250 yards.

It may be noticed from my statement, that two fractures had taken place while the train was at Winser Bridge on its way from Manchester; and it has been urged as a means of avoiding this class of accident, that the strength of the coupling chains should be considerably increased. I should exceedingly regret to see that course followed, until the proportion of accidents which occur from trains leaving the rails is very largely diminished, as the result of making the couplings so strong, that they could not be broken with a largely increased strain upon them would probably be the sacrifice of a number of lives, which are now preserved, by the breakage of the couplings and the carriages remaining on the rails or on the tops of embankments and viaducts, instead of being dragged down them.

One of the results of making up these monster trains, is that on many parts of such a line as the East Lancashire Railway between Colne and Manchester the engine driver is unable to see the half of his train behind him, and he therefore would not know, except from the drag on his engine, if one half of it had not broken away. In this very instance, as regards No. 3 train, where the leading engine had been taken of at Ramsbottom Station and ordered to push the train up the incline, the consequences of the collision might have been made very much worse, if the driver of the following engine, who could not see what was amiss ahead of him, had not heard the whistle for the breaks from the leading engine, and had not immediately taken steps to pull up. Again, I have seen suggestions thrown out, that the best mode of preventing similar accidents would be by placing an engine at the tail of trains ascending steep inclines—and the inspector who accompanied No. 3 train, informed me, that one of his reasons for placing the engine at the tail of the train was, that he thought there were eight carriages in rear of the last break in that train, and that these might break away and run back. But the practice of pushing a train, especially a long and heavy train up a steep incline, cannot be too severely censured. It may be done with impunity for a long time, and then some severe accident will prove, that it is not safe to follow a dangerous practice because it has not hitherto led to accident.

The practice of pushing a train up an incline is most objectionable and dangerous, and should be given up.

2. The accident would certainly not have occurred, if the guard Tomlinson, towards the tail of the train had not followed the usual, and I believe I may say, the invariable practice of getting down and leaving his break to assist the passengers in and out of the carriages. The man was not to blame, but the practice must be wrong when it can be followed by such lamentable results. Where a station is situated on a level it may be safely done; but where it is, as in the instance of Helmshore, on a rising incline, the guard in the break at the tail of the train (for that is its proper position, although it is impossible to induce the managers of certain Railways to think so) should never be allowed to quit his break when stopping at the station.

3. The accident would not have occurred if the Helmshore Station had not been situated on an incline on which carriages would run downwards by the force of gravitation alone.

4. The accident would in all probability not have happened if these excursion trains had been taken home in five trains of the ordinary size at regular intervals apart, instead of in two very large trains and one ordinary sized train. This would have entailed very little additioual expense to the Railway Company beyond that incurred, as the engines were all available and used with the trains that left. On inquiry I learnt that these excursion trains from Colne to Manchester returned a clear profit after paying all expenses approaching to 250*l*., and I submit that as this is the case generally throughout the country with regard to excursionists, they are fully entitled, and after all it is decidedly for the true interest of all Railway Companies, that they should be carried in the safest possible manner. The experience of many years will show that this is not the case, more acccidents, in proportion, occur to excursion trains than to any other class, and this is the inevitable result of departing from the practice that prevails with ordinary trains, as the excursionists are very generally sent in monster trains which are very difficult to manage, and which subject the couplings and breaks to unnecessary and dangerous strains. The accident possibly might have been prevented after the coupling broke, if the train had been supplied with a sufficient amount of break-power. On this section of the Lancashire and Yorkshire Railway the maximum load for a passenger engine is about 12 or 13 carriages, and an ordinary train of that size is furnished with one guard and an ordinary break at one end, and a set of Newall's breaks consisting of three vehicles with breaks on them continuously coupled together and worked by another guard at the other extremity, so that if the same care and precautions had been exercised towards these excursion trains, No. 2 train would have been supplied at least with two sets of Newall's breaks and two ordinary breaks and with four guards.

The officers of the East Lancashire Railway appear to be fully alive to the importance of providing a large proportionate amount of break-power for all the ordinary trains. and the superintendent was impressed with the necessity of having sets of Newall's breaks for the excursion trains, as he applied for and obtained in April last additional sets of these breaks for the very purpose of working these excursion trains, on the ground that he should not like to have to run heavy excursion trains with single breaks as they did last year, (1859). I have already stated that No. 3 train was supplied with one set of Newall's Patent breaks and one ordinary break, but the Superintendent informed me that the four spare sets of Newall's breaks were in store, had all been apportioned to the four excursion trains from Colne on the 3rd September, so that he had none available, when he had to carry 1,500 more people than he expected. He also told me that he had some months since applied to the Directors to sanction the supply of some additional sets, and the order had been given for their supply, and that they would shortly be available.

In proof of these opinions, I should state that the Railway Company supplied me with a train of 17 carriages, the number which ran down the incline, weighted as near as possible the same as on the night of the accident, to experiment with, down the incline from Helmshore Station, and it was conclusively established from the experiments which were made on the 13th ult., that if the ordinary break, fourth from the tail of the train had been left on, when the train stopped at Helmshore, the carriages would not have started to run down the incline,

when the couplings snapped, as they remained stationary when the engine was uncoupled from them, and it is even very doubtful whether the coupling would have broken at all.

It was also proved that it would take about 2m. 8s. for the carriages to run down from Helmshore to the spot where the collision took place, when no break was applied, and that they would at that time have acquired a velocity which was gradually being accelerated, of 18 miles per hour, and that when travelling at that rate, the application of a set of Newall's breaks brought the train to a stand in 29 seconds after running 123 yards, so that if these breaks had been attached to the tail of No. 2 train, and had been applied as soon as the guard got into, not on the top of the carriage, fitted with the patent breaks, it is quite possible, that the accident might have been avoided altogether, or that, at all events, the serious results might have been sensibly diminished. It was also ascertained that the guard Tomlinson might start from the platform, run after the descending carriages and get on the same carriage as his break was on, and put on his break and stop the train in 195 yards, whereas the collision took place at 654 yards, but this was an experiment tried during daylight, when the man knew exactly what he had to do and could see his way, when the rails were dry and in good order, a very different operation to what took place on the night of the accident, when there were a number of people on the platform, the night dark and the rails wet and slippery.

I also tried several other experiments to ascertain in what disance this train could be stopped when the ordinary single break was applied at stated places, but they are not especially pertinent to this inquiry as I have no means of knowing whereabouts the descending carriages were, when Tomlinson put on his break.

This accident is very similar in its nature to one that occurred to an excursion train at Round Oak Station on the Oxford, Worcester, and Wolverhampton Railway on the 23rd August 1858. In both instances the couplings broke from the rebound of the carriages after the trains stopped and before they attempted to start again; and both the fractures occurred in consequence of too severe a strain being suddenly brought on the couplings of the carriages, by using such heavy trains while they were standing on an incline.

In the accident at Round Oak, which was inquired into by Captain Tyler, he saw grounds for blaming the guard. In the present one, I cannot say that I find any. It is true, that in the evidence given before the coroner a witness deposed to his being the person who had solicited, at the door of the carriage, that a collection should be made for him for bringing them safe, but Tomlinson denies that he did anything of the kind, but allows that he was asked by some person at Manchester (Salford Station) to have something to drink, which he declined, but consented to have a meat pie from the refreshment room. There is however no imputation respecting his sobriety, and he is allowed to possess experience in the working of this incline and it is almost certain that he got on the carriage and put on his break. The conduct of the other guard, Chippendale, is more exceptionable, he admits that while the train was standing at Ramsbottom station, same one asked him to have something to drink, and after the train started, he got into the carriage instead of remaining at his break on the top, (a very objectionable situation be it observed), and drank some rum and smoked his pipe, and got out of the compartment time enough to attend to his break in stopping at the Helmshore Station; but there is nothing to show that this man's acts had any effect whatever in producing the accident.

In conclusion, it may be asked how are such sad accidents to be avoided in future? The answer is, that they may be avoided in a very simple manner, if Railway Companies can only be induced to work their traffic in a different manner:

1st. By discontinuing the practice of running heavy excursion trains, and by sending excursionists forward in ordinary sized trains.

2nd. By attaching to all trains a larger amount of break power and placing a break van at the tail of every train—and when such trains stop at stations situated on rising inclines, not permitting the guard at the tail of the train to quit his break for the purpose of assisting the passengers.

I trust that this second dreadful accident will cause all Railway Companies to examine the manner in which their traffic is worked, so that the lesson may not be limited to the railway on which the accident has actually occurred.

There is yet one other point which more particularly concerns the duties of the inspecting officers, and which should in my opinion be brought under their notice. The length of railway lines on which steep inclines occur, is increasing every year; and as the legislature has not deemed it expedient to entrust the Board of Trade with any power as regards the mode in which traffic shall be conducted, but confines its interference to unopened lines of railway; and as Railway Companies have very generally disregarded the recommendations made from time to time by the Board of Trade, on the subject of increasing the amount of break power, on the establishment of a communication between guard and driver, and on the placing of a break at the tail of every train, &c., it remains to be considered whether the inspecting officers, looking solely to the question of the public safety, should not, when inspecting new lines of railway, decline to sanction any stations which are placed upon inclines, on which carriages will travel by the force of gravity alone. Accidents from the breaking away of carriages or the separation of trains into two or more parts are very much more numerous than the public are aware of. Those which are reported to the Board of Trade do not probably amount to one tenth of those that occur, because happily, in the greater portion of cases, they are not attended with serious injury to life or limb. I know, but not officially, of instances where vehicles have broken away, and been caught by sending an engine after them on the same line, only a very short distance in front of a passenger train; and of others where, by the presence of mind of station masters and pointsmen, descending waggons have been turned off the main line into a siding and been destroyed. In the course of two years, and in two accidents alone, 25 persons have been killed and 127 injured from the construction of stations on inclines, and I submit, that such a sacrifice of human life, and such an amount of injury to persons, should be held sufficient to justify any inspecting officer in declining to pass a station on an incline on which carriages will descend by the force of gravity. And with their Lordships' sanction, I think, that notice should be sent to all Railway Companies engaged in making new lines, if the other inspecting officers agree with this view of the subject, that stations on such inclines could not be passed in future.

I have, &c.

W. YOLLAND,

Colonel R.E.

The Secretary to the Board of Trade,

&c. &c. &c.