than the period, 9:47, at which it is due to arrive from the north.

I understand that this discrepancy arises from a difference between the bills of the Lancaster and Carlisle, and the London and North Western Companies, and that it is of some standing; but it should not be allowed to exist any longer. It makes an error of some 8 or 9 minutes on the average in the running of the train, inasmuch as the average stoppage of the train at Preston amounts to upwards of 45 minutes, as taken from these 28 days.

The principal cause of this accident has been a want of caution, and a want of obedience to the fixed signal, on the part of the driver, who is an old servant of the London and North Western Company; but another cause, and one which requires correction, is the want of better arrangements for the working of the junction between the main line and the north sidings.

It would be better if the fixed signal were removed from its present position, where it is 30 yards on the wrong side of the first point of danger, and if it were placed considerably nearer to the station platform, and worked by the siding pointmen with a wire. No train should then start before the signal until the signal was turned off; and a bell or other means of communication should be provided, with which the pointmen might be warned to have the road clear, and to turn off the signal, previously to the starting of every train for the south. There would then be less risk of two trains meeting, as they did on the present occasion, whilst passing in opposite directions over this important goods-siding junction.

I have, &c.

The Secretary,
H. W. Tyler,
Railway Department, Captain, R.E.
Board of Trade.

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XXX

Leases of the North Union Railway,
Secretary's Office,
PRESTON, Oct. 29, 1858.

SIR,

Your communication of the 22d instant, together with the copy of Captain Tyler's report of his inquiry into the circumstances attending the slight collision within the limits of the Preston station on the 23rd September, were under consideration of the committee of management of this line of railway at their meeting yesterday.

I am directed to acquaint you, for the information of the Lords of the Committee of Privy Council for Trade, that the directors have determined to adopt the suggestion of Captain Tyler, R.E., in regard to the interchange of communication by signal between the passenger platform and the siding points abreast of the goods station, previously to the starting of any train from the passenger platform for the south.

I have, &c.

The Secretary,
RICH. DAWLINGS,
Railway Department, Secretary.
Board of Trade.

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OXFORD, WORCESTER, AND WOLVERHAMPTON RAILWAY.

Railway Department, Board of Trade,
Whitehall, Oct. 16, 1858.

Sir,

In compliance with the instructions contained in your letter of the 25th ultimo, I have the honour to report, for the information of the Lords of the Committee of Privy Council for Trade, the result of my inquiry into the circumstances which attended the accident that occurred on the 23d August, between the Round Oak and Bretell Lane stations of the Oxford, Worcester, and Wolverhampton Railway. These two stations are situated, respectively, at 23, and 4 miles to the south of Dudley, and at 25, and 23½ miles to the north of Worcester. The line runs between them, for a mile and a quarter, over a series of curves on which the view is much obstructed, and on a gradient of 1 in 75-18 falling towards the south.

On the day in question, an excursion train returning from Worcester to Wolverhampton reached Round Oak at 10 minutes past 8. It was composed of two engines and tenders, 28 carriages, and 2 break-vans, one of these latter having been placed immediately behind the engine, and the other at the rear of the train. Shortly after it arrived at this station, the couplings gave way near the middle of the train, and 17 carriages, containing about 450 passengers, with a van behind them, began to run back down the incline towards Bretell Lane.

A second train, also full of excursionists, was following the first one, with an interval of 11 or 12 minutes between them; and the loose carriages ran back upon the second train with great violence. The engine in front of the second train, which lost its funnel and its buffers, was so little injured in other respects as to be able afterwards to proceed on its journey; but the three last vehicles of the first train were broken all to pieces; and the most dreadful consequences resulted to the passengers, 14 of them having lost their lives, fifty others having been more or less severely injured, and upwards of 170 persons, altogether, having applied for compensation, on account of injury to their persons or their clothes. I append

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a list of the names of those who were killed and of those who were most severely injured.

Such are the facts of what may be considered as decidedly the worst railway accident that has ever occurred in this country, and I shall now proceed to state in detail the different circumstances connected with it.

Notices were issued, under date the 12th August, of an excursion train to be run at very low fares on the 234 of Birmingham to Wolverhampton, at numerous intermediate stations, to Worcester and back. I enclose a copy of one of these notices, by which it will be seen that the train in question was intended for the use of teachers and children of the various schools on the route only, and that no other classes of persons were to be allowed to avail themselves of it; though I may add that this intention was not carried into effect, and that the following numbers of adults and children respectively, appear, by a return with which I have been furnished by the company, to have been actually booked to travel by it between the several stations enumerated and Worcester—

Wolverhampton - 35
Prestfield - 12
Briston - 110
Dudley - 25
Princes End - 266
Tipton - 25
Dudley - 89
Netherton - 9
Round Oak - 9
Brett lane - 10
Stourbridge - 30
Kidderminster - 144
Hartlebury - 3

Adults - 767
Children - 739
Total - 1,506

This train left Wolverhampton at 9.21 in the morning, with 1 engine and tender, 24 carriages, and 2 vans. It travelled in due course as far as Brett lane; but as it was starting from that station on its way towards Worcester, with 2 engines and tenders, 22 carriages and side chains of a carriage, ten or twelve from the last van, gave way. The same thing occurred again, two or three carriages further from the last van, as the train was starting from Stourbridge, with five additional carriages attached to it; and after reaching Droitwich the guard discovered that a third screw coupling had been fractured, at four or five carriages from the hind van, though the side chains had in this last case remained perfect, and had prevented an actual separation from taking place.

These fractures were repaired on the journey, according to the means at the disposal of the guard. At Brett lane he connected the draw-bars of the carriages by means of four stout links, such as are used for goods couplings; at Hagley he employed a second screw coupling, which he found between the two carriages which had become disconnected; and at Droitwich he re-united the central attachment by means of two links on the one side, and a hook and a link on the other side. The train then proceeded to Worcester without further accident, and reached that place at 12.32.

I enclose herewith, a section of the line between Wolverhampton and Worcester, by which it will be observed that the gradients on the whole fall considerably from the former to the latter station; that, more particularly, the train was starting down falling gradients of 1 in 260 and 1 in 191 respectively, when the couplings gave way at Brett lane and Hagley; and that, with the exception of three short portions of rising gradients, of which 1 in 264 is the steepest, the line falls all the way from Hagley to Droitwich. Considering the nature of these gradients, and having regard to the fact that the fractures of the couplings on the journey towards Worcester all occurred, not in the front of the train where the strain upon the couplings in consequence of any tractive power exerted by the engine would naturally be most severe, but in the last half of the train, it would appear, unless these couplings were in a very defective state, that the break of the hind van had been employed in a most injudicious manner.

The broken parts of the couplings that were fractured on the journey towards Worcester were not retained for examination, so that, with the exception of one half link, I have not had an opportunity of seeing them, and I am therefore unable to form an opinion as to whether they appear to have been the ordinary couplings supplied by the carriage builders with the carriages. To judge by those which I have observed upon other carriages of the company, there could be no likelihood of such results, in the ordinary course of events, as falling gradients, although, as I shall presently have occasion to show, there is reason for believing a great number of these couplings to contain certain defects.

A good deal of suspicion, therefore, to say the least of it, must fall upon the hind guard, Frederick Cook, as to the mode in which the break of the last van was employed on the journey towards Worcester; and this suspicion is by no means lessened by the circumstance that he permitted half-a-dozen passengers to ride with him in his van, and that he employed one of their number, according to his own admission, to take the break off in two cases. There is evidence, also, of his having been smoking and drinking with the passengers in his van, which leads to the belief that his conduct must have been altogether highly irregular.

In descending the incline from Round Oak to Stourbridge, there were four persons acting as brake-men in different parts of the train; Mr. Harris, as assistant in the office of the secretary and superintendent of the line, who was travelling in charge of the train between Dudley and Worcester; the woman, who superintends the working of the back engines from siding to siding, and who happened to be going to Stourbridge; and the two guards in the front and hind of the train, one of whom was the left hand guard of the line the train was worked by the two guards. Mr. Harris having ridden in a second-class break carriage between Dudley and Stourbridge and between Hagley and Kidderminster, having performed the rest of his journey, partly on the second engine, partly on the footstep of the last van, and partly, between Droitwich and Worcester, in the last van.

Mr. Harris, himself, was only aware of two of the fractures which occurred, and he simply reported to the secretary and superintendent on his arrival at Worcester that there had been a fracture of the couplings; but the inspector of rolling stock who examined the train there, found that there were, as has been already stated, two broken screw couplings and four broken side chains, as well as that a third screw coupling had given way, of which the side chains remained complete. He states that two of the screw couplings gave way in the middle of the "p" link, as it is technically termed, or that link which is passed over the hook of the draw-bar; that in the third, the "p" link had disappeared altogether; and that, as far as he can recollect, the links of all four of the side chains had been broken. He caused all the side chains which had not been broken, but he left the central attachments as he found them, both on account of the difficulty of getting at them in the siding, and of pulling out the draw-bars in order to repair the screw couplings which were not removed to them, and also because he considered that the goods coupling links which had been employed were stronger in effect than the screw couplings them-
selves, and that in the way in which they were
fastened the train might travel safely back to Wover-
hampton.

The excursionists remained at Worcester between
12.32 and 6.30, and were then sent back in two
trains on their return journey, by direction of the
secretary and superintendent, in consequence of the
heavy gradients which they would have to encounter,
which would have been too much for two engines
with upwards of 40 vehicles.

The first train, consisting of 28 carriages and 2
vans, proceeded, at 6.30, with 1 engine in the head
and tender to Stourbridge, and having been supplied at
that place with a second engine and tender, it reached
Round Oak at 8:10. The second train, composed of
14 carriages and 2 vans, and drawn by 1 engine
and tender, reached Brettel Lane at 8:11, and started
from thence for Round Oak at 8:14, 11 minutes,
according to the journals of the guards, and 12
minutes, according to the record book at the Brettel
Lane station, behind the first train.

The night was rather dark, the smoke was blowing
here and there across the line, from the manufactories
which are so numerous in that part of the country,
and the rails were slightly slippery.

After the first train had been brought to a stand
at Round Oak, and before any attempt was made to
start it again, of which he was standing on the up-platform, heard a "snap." He
looked round, and found that a portion of the train
was falling back down the incline towards Brettel
Lane. He went to the engines at the head of the
train, and informed the drivers of what had occurred,
and after getting a light at the station he followed
the loose carriages down the hill, but without being
able to overtake them.

The booking clerk at Round Oak observed, as soon
as he had collected the tickets (all of which he took
from one individual, who had taken tickets for his
party), that a part of the train had broken away,
and by telegraph to Brettel Lane, Kidder-
minster, or Stourbridge, to send information of
the occurrence; but he was unable to gain attention
from the clerks at those stations.

Of the two drivers and two firemen, only one of
the latter, the fireman of the second engine, felt
anything of the separation that took place in the
train. As this man was looking out for the signal
at the rear, he noticed a short jerk, as if the break at
the rear had been eased off, and the carriages had fallen
back by their own weight. He experienced this sensation just before the fireman
was able to say that the carriages had become detached, and he
naturally concluded that the jerk he felt was the
same that caused the separation of the train.

It may seem at first sight an extraordinary cir-
cumstance, that a large portion of a train should
become separated from the remainder, and take its
departure from a station in the opposite direction to
that in which it was intended to travel, almost
unnoticed, excepting by one man; but it must be
remembered that the night was rather dark, that
the whole train was between two and three hundred
yards long, and that, even after 17 carriages and
a van had disappeared, there still remained a train of
vehicles measuring with the engines upwards of 100
yards in length.

The statement of the guard, Cook, to me, was to
the effect that he turned his break on, perhaps 20
yards before the train stopped at Round Oak; that
the break, as applied, did not appear with the rebound of
the buffers when he eased his break off; and that
he put on his break again, and skidded all the four
wheels, so soon as he felt the carriages coming back
up the incline. He also states that his break was in
very good order; but that though the speed slackened
at one point, it gradually increased again as the car-
rriages went down the incline until it attained to
10 or 12 miles an hour; that he first saw the other
train when it was passing under the Moor Lane
Bridge; and that, having previously implored of
the passengers to jump out and save their lives, he
dropped off his van just before it struck the engine
of the second train.

The accompanying diagram, with which, as well
as the others which are enclosed with this report,
the engineer of the company has been so good as to
supply me, shows distinctly the exact site of the
collision, the curves and gradient over which the
two trains were running, and the distance at which
they would be seen from each other before the col-
losion took place. As the driver of the second train
pointed out to me on the line, he first saw the front of
the van in front of him when that van was near the
Moor Lane Bridge, which is about two thirds of a
mile from Round Oak, and when he was about 300
yards from it. He states that he immediately
realized that the van was running back upon him; and did
not stop his train, but that he had reduced
its speed from about 10 to 2 miles an hour before the
collision occurred.

The shock appears to have been severely felt in
the second train, though that train had almost come
to a stand, and, from the breaks having been all
screwed on, presented, as it were, for the
vehicles of the first train to impinge against. The
guard in the hind van of the second train was
knocked from one end of his van to the other, and
injured, but not killed, and the greater part of those who were
seriously injured, appear to have been in the first
train.

In order to ascertain as nearly as possible what
would be the actual effect of one break van on this
incline at the rear of 17 carriages, a train was pre-
pared in the course of my inquiry, to resemble as
nearly as might be the portion of the first excursion
train to which the accident happened; and 16 of the
carriages were loaded with 28 cwt. each, to represent
the weight of the passengers which they probably
contained at that time. This experimental train was
started a number of times from the Round Oak
station, and was allowed to acquire different rates of
speed before the break was applied; and the ex-
periments showed, that at a speed of about 10 miles an
hour, acquired in 440 yards, the train was stopped
in 883 yards after the order to apply the break was
given, and 111 yards short of the point of collision;
at slower speeds the train was stopped, as might of
necessity have been expected, in shorter distances;
and that when the break was put on in the manner
described by the guard, soon after the train was
found to be running back upon itself; the break was
accomplished, and no further speed was acquired.

It is true that the rails were in better order when
these experiments were tried than they are described
by some of the witnesses to have been on the night
of the 23d August, and that there may have been
variations in the weights of the van, or of the train,
or both, which would have influenced the results;
but, allowing ample margin for such contingencies, it
is still impossible, if the break was, as the guard
states, in proper order, and if it was applied, as he
also asserts, as soon as he discovered that the train
was actually running back upon him, that so violent
a collision should have occurred; and it is even
certain that the train would under these circum-
stances have been brought to a stand at no great
distance from the Round Oak station, and long before
it reached the point of collision.

As much as the experimental train acquired,
before any break was applied, a speed of about 10
miles an hour in 440 yards, so the accelerating force
acting upon it uniformly up to that point may be
assumed to have been 981 feet per second; and
neglecting the increased resistance of the atmosphere
at increased speeds (which would increase perhaps
from a quarter of a pound to about four fifths of a
pound per square foot of frontage between the speeds
of 10 and 18 miles an hour), it may easily be cal-
culated by the formula, \( V = \sqrt{2gh} \), that the same train
would acquire a speed of about 18 miles an hour on the same gradient in 1,484 yards, or by the time that it arrived at the point of collision. Taking the evidence that was existed, he endeavoured to convince me that it was not to be depended on; but I observe that in an examination that he afterwards underwent before the coroner who inquired into the circumstances of the accident, he made the extraordinary statement that he took the break off again just before the collision occurred. It would be impossible to assign any reasonable motive for such a proceeding; and I can only suppose that he gave this piece of evidence in order to account for the condition in which the break screw remained.

Two of the passengers who were riding in the van with Cook, and who are now recovering from the injuries which they received in the collision, assert that he was in the van with them whilst the carriages were running back, and to a certain extent corroborate his statements; but their evidence is of such a nature, and they are so far contradicted either themselves or each other, that it becomes impossible to attach importance to what they say; and it is impossible to credit the evidence of a woman who states that she heard Cook, from her house, as the train was passing, telling the passengers who were riding with him in his van, that he had done what he could for them, and that they must jump out to save their lives.

The statement of the driver of the second train, and of other witnesses, flying from the wheels of Cook's van before the collision, may at first sight appear to indicate that the wheels were skidding along the rails; but it must be remembered that they were not, as far as I can see, to be attributed simply by the abrasion of small particles of iron, and by their ignition in the oxygen of the atmosphere, for which their bright surfaces presents a strong attraction; and that this effect was produced by every turn of their wheels, as they descended towards Breetl Lane, came into collision with the train behind them at a speed somewhat under 18 miles an hour, more or less, according to the strength and direction of the wind, (which is stated to have been blowing across the line on the evening in question,) and according to minor conditions.

It was already as clear as reasoning of this description could make it that Cook had employed his break as he might have done for the purpose of stopping the carriages; but I endeavoured, by an examination of the wheels and break apparatus of the van, to throw further light upon the subject, and, if possible, to discover some positive indication as to whether the break was on or off when the collision occurred.

The wheels had evidently been in regular use for breaking purposes, as there were numerous flat places, and marked discolorations, upon their circumferences; but there was nothing to show whether any of these symptoms had been produced on this particular occasion, or whether they had all been the result of the application of the break blocks, and skidding of the wheels along the rails, on the previous morning journey, or whether some of them were not of still longer standing.

The break screw, however, afforded evidence of a more important character. The portion of it on which the nut had been worked was distinctly shown, in strong contrast to the remainder, by the oil which still moistened its surface; and the nut itself was at the bottom of that oily portion of the screw. If the nut had been at the top of that portion, there there would have been proof that the break was on at the time of the collision; if the nut had been in the middle of that portion, then it might have been a matter of doubt as to whether the break blocks were acting on the wheels; but as it was at the bottom of that portion no doubt remains that the break must have been off when the collision occurred. I may add, that the best condition of the carriages at that point was that the train appeared; and this happened, apparently, from the force with
which the buffers rebounded after the carriages had run forward upon the engine in the course of starting the engine, was the effect of an unusual circumstance for the rebound of the buffers to snap the couplings, and it was the more likely, unless care was employed, that this effect should be produced in so heavy a train and on so steep a gradient; though it may be observed, that if Cook had applied his break at the proper time, before the train stopped, the carriages would not have run forward on the engine, the rebound would not have taken place, and the fracture would not, in all probability, have occurred.

The carriages were united at the point of fracture in the usual manner, by means of a screw coupling and two side chains. The screw coupling, of which I endeavoured a full-sized drawing, was broken in two pieces, in the screw itself (marked A), and in the eye of the strap which connected the nut with the stud securing it to the draw-bar (marked B). The latter fracture was evidently the first to occur, because if the former had occurred first there would have been no strain to effect the latter, and because the former appears to have been occasioned by the cross strain to which the screw was subjected, by one strap only holding on to one side of the draw-bar after the other had given way; the screw was of good size (1½ internal diameter), and of a good quality of iron; the strap was also of sufficient size (½ diameter), but the iron was not so good, and it gave way at the weld of the eye, which was so defective that only about a third of the section had been holding. As this was one of two straps by which the coupling was secured to the draw-bar, two thirds of the whole strength was thereby wasted. The screw coupling is not perhaps of the best form, as a "in" link on each side of the screw may be considered preferable to the arrangement shown in the drawing, where there is a "in" link on one side only, and in that connexion with the draw-bar is by means of two straps, containing four welded ends, and a cross stud.

These couplings were supplied with the carriages by a first-rate carriage builder, Mr. Williams of London, and the company do not appear to have had much trouble with them before; but upon experimenting upon some of them since the accident they discovered that the greater proportion of those tried had welds similarly defective. This was so much the case, indeed, that it seems desirable to discard these sort of couplings from use altogether; though it is only one of the many defects they state that they have required of from 104 to 184 tons to fracture them, and to have been broken by weight hung perpendicularly from beneath them. The side chains gave way, one of them at the hook, which was of ample size and tolerable quality, and the other by the screw pulling through a defective nut, by which it was fastened to the carriage framing. The side chains generally, as far as I had an opportunity of observing them, appeared to be roughly manufactured, and fastened to the carriages; but, indeed, I am not disposed to lay stress upon that fact, for they are a description of fastening of doubtful utility. If too tightly coupled, they may produce accident by causing the carriages to be thrown off the line on a curve; and when loosely coupled, they rarely resist the jerk which comes upon them after the fracture of a screw coupling; though it must be added, that they did so on one of the occasions on which the central couplings parted in the course of the journey to Worcester on the morning in question.

As regards couplings too, in general, they must not be made too tight; that is said to be so, it is said to be so, that they should give way, in cases where an engine, and perhaps part of a train, runs over the side of a bridge or an embankment, and in which, but for the giving way of the couplings, the remainder of the train might be pulled after them; but it is exceedingly desirable, on the other hand, that such couplings as it may be determined to adopt, as those best fitted for the duties to which they are subjected, should be made of like material, and this important point does not appear to have been sufficiently attended to in regard to the couplings in use on this line; though I may add, and it is only right that I should do so, that I believe them to be at least as good as those generally in use on other railways.

The duty required of the couplings varies, again, very materially, even with passenger trains; the strains upon them being comparatively small in the case of a light train running upon a level road, and increasing with the weight of the trains and the steepness of the gradients, up to a point at which a careful use of the breaks is required to prevent fracture. It would be impossible, of course, in practice, to vary the couplings with the different trains, and to provide in each case precisely that which was best suited to the occasion; and it must be expected that couplings will occasionally fail, though this will occur less frequently in proportion as the couplings are of good quality and the servants of the company careful. But in truth, the fracture of a coupling rarely occurs with fair treatment in the ordinary course of passenger traffic, and when does it occur it ought not to be produced; and, indeed, even against the worst insurance against accident, in this, as in many other cases, being found in the selection of intelligent men of known character and steadiness for the execution of responsible duties.

If this precaution had been taken on the occasion in question, if Cook's place had been supplied in the excursions train, both in the morning and the evening, by a trustworthy person the probability is, in fact it may almost be considered as certain, that the couplings, with all their defects, would have been found to be sufficient, and would have been running to this day, because, as one of the sides of their connexion with the draw-bar is by means of two straps, containing four welded ends, and a cross stud.

And this is the particular point in which direct blame attaches to the company on account of the present accident. Cook had been a goods guard in their service for eight years, and had been employed during several summers to take charge of excursion trains. It cannot for a moment be supposed that a man habitually trustworthy, in which, is on this occasion, could only have so far forgotten himself as to invite the passengers into his van, to smoke and drink with them, to employ them at his break handle, and four times to fracture the train and do no mistake in his carelessness; and if the company or their officers were not aware of his character previously, then it can only be said that they ought to have been aware of it, and that they ought to have used an amount of circumspection that would have prevented them from appointing a careless man, as he proves clearly to have been, to such important duties.

Cook's fellow guard on this occasion was a porter in the service of the company, who had acted in that capacity for three years, and had been employed when required as an assistant guard over a period of twelve months. He was riding in a brake van next behind the engine, and only heard of the carriages having been separated from the train from the driver, of whom he went to inquire as to his reason for not starting the train, the company, in consequence with a signal which he had given him to do so.

As I have already stated, there were four breaks at work in the morning besides the tender break, when the train descended the incline towards Worcester; but even then there were only two men regularly acting as guards to the train, the third break having been taken by an assistant superintendent of the company, the fourth from Dudley to Worcester, and the fourth by the bank foreman who happened to be travelling in that
direction; and on the return journey there were only two guards, as has been seen, one at each end of the train, to attend to the breaks and control the passengers. The one break at the rear was certainly sufficient to have prevented the accident that actually occurred, if it had been in better hands, and had been properly employed; but such a proportion of break power as two vans to 28 carriages cannot be considered otherwise than most insufficient for general purposes; and such a proportion of controlling influence as that which could be exercised by two guards, with their own peculiar duties to attend to, is equally inadequate for keeping 1,000 pleasure-seeking excursionists in order.

I have before had occasion to draw their Lordships' attention, in the case of accidents which have occurred on other railways, and more particularly in the case of those which have happened in the manufacturing districts of Lancashire and Yorkshire, to the fact that these excursion trains, which are run at irregular times, which convey unusually large numbers of passengers, always more or less unruly, and which for every reason require extra care and attention, are worked without the precautions that are considered necessary with the ordinary passenger trains; and there has evidently been too much of a similar system adopted with regard to this train, in which the carriages were overcrowded, and the break power was insufficient, in which passengers were allowed access to an unprotected break, and attached to which there were no regular passenger guards, but only two men, one of whom was not well selected, acting in that capacity. And here I would observe, that the overworking of third, and even second class passengers and excursionists, in a railway carriage, is an evil which might well be made a matter of legal interference, as it is of much more importance that the number conveyed should be properly proportioned to the size of the railway, than that such a provision should be enforced, as it is to a great extent, in the case of vehicles in public use on common roads.

I am happy to learn that the company have made arrangements since the present accident for employing the continuous breaks of Mr. Fay, as it is of great importance that a system of this description should be employed upon a line of this nature.

As a great deal has been said with reference to this accident, as to the insufficiency of the interval, 11 or 12 minutes, which was allowed between the running of the two portions of the excursion train, it is right that I should observe that in this particular case the collision would, up to a certain extent, have been still more fatal if the interval had been greater, because the running time of the carriages would have attained a higher speed; and that it would have been less and less violent in proportion to the decrease of the interval, because, the shorter the distance which the carriages had to run, the less the speed that they would have acquired. I may also remark, that though on this occasion the electric telegraph would have availed nothing after the fracture of the couplings, even if it could have been got to work, still it is exceedingly desirable that more use should be made of it on a line of this description, and particu-

larly that it should be employed in announcing the approach or reporting the progress of trains of this nature from station to station. It will be remembered, as I stated near the commencement of the present report, that the booking clerk at Round Oak endeavoured ineffectually to gain the attention of the clerks at Bredell Lane, Kidderminster, and Stourbridge, after he heard that the train had become divided, and it is therefore clear that the telegraph would not, as it is at present worked, be likely to be of much use in the case of any sudden emergency.

There are two further matters on which it is my duty to remark, as indicating a want of proper discipline in the administration of the company. The one is, that a distinct intimation, to which I have already referred, and which was contained in the printed bills of the excursion train, signed by the general manager of the company, to the effect that the teachers and children only of the schools would be allowed to avail themselves of the train, was wholly unattended to at the different stations from which passengers were conveyed; and the other is, that I found that the record-book of the trains at the Round Oak Station, in which the arrival and departure of each ought to have been entered, had fallen into disuse for three weeks before this accident. This book appeared to have been under the charge of a porter at the station, who, having filled the one which he had in use, had neglected to apply for a new one, waiting, as he said, until he should have been time to make a fresh supply of stores at the end of the month. Such a book, to be of use, should be regularly attended to, under the eye of the station-master.

A very few words will suffice for summing up, the causes of this accident. A man was selected by the company for the important duty of head guard to a heavy train who proved to be anything but trustworthy and competent, who, in performing that duty with the attention that it required, caused the fracture of a defective coupling, and permitted the greater part of his train to run backwards down a steep gradient, on which it came into violent collision with a following train.

The consequences have been deplorable in the extreme, and are not likely to be soon forgotten by the company on whose line the catastrophe has occurred. To that company no further warning will be necessary to induce them to use all reasonable means for preventing a similar accident from again occurring; but it is to be hoped that other railway companies will not neglect to profit by the lesson that is thus afforded to them, and particularly those companies that are in the daily habit of running passenger trains, where changes would in that case be frequent. They may, and do, carry on this practice for many years, without any serious results, but the risk and responsibility that they incur are far greater than any saving of expense or trouble that they can affect.

I am, &c.

The Secretary.

Railway Department,
Captain, R.E.
Board of Trade.

RHYNHEY RAILWAY.

Railway Department, Board of Trade,
Whitehall, October 23, 1858.

I am directed by the Lords of the Committee of
Privy Council for Trade to transmit to you the
enclosed copy of a report made by Captain Tyler, R.E.,
of his inquiry into the circumstances attending the
collision which occurred on the 21st ultimo at the
Hengoed station of the Rhynhey Railway.

My Lords trust that the directors will place safety

switches on all the mineral sidings at which there is
any danger of similar accidents occurring.

My Lords also trust that the directors will take
warning by this accident, and cause proper break
vans to be placed in the rear of every train.

I am, &c.

The Secretary to
Rhymney Railway Company.
Captain, R.E.

DOUGLAS GALTON,