South Eastern Railway.

Board of Trade, Railway Department,
8, Richmond Terrace, Whitehall, London, S.W.,
April 8th, 1898.

SIR,

I have the honour to report, for the information of the Board of Trade, in compliance with the Order of the 21st ult., the result of my enquiry into the circumstances attending a collision which occurred about 9 a.m. on that date, at St. John’s Station, on the South Eastern Railway.

In this case, while the 7.45 a.m. train from Tonbridge to London was standing outside the up home signal, at St. John’s Station, it was run into in rear by the 7 a.m. train from Hastings, the latter running at this hour on Monday mornings only.

The weather was very foggy at the time of the accident.

The result of the collision was disastrous so far as regards the Tonbridge train, in which three persons were killed on the spot. I am informed that the Company’s doctor has seen about twenty passengers who were injured, but that a very much larger number have complained of being shaken, &c.

The Tonbridge train consisted of engine and tender and ten vehicles, the two rear vehicles being a third-class carriage and a brake van; this train was driven forward by the shock about 80 yards, and the two rear vehicles were telescoped; the brakes were, fortunately, not on the train. One pair of wheels of the van next to the engine were derailed. The guard had a very narrow escape, only jumping off the rear brake van just as the collision occurred; he (guard Stevens) is stated to have subsequently rendered valuable assistance to the injured.

The Hastings train consisted of an eight-wheeled tender engine, with driving and trailing wheels coupled and a leading bogie; two first-class, one second-class, three third-class carriages, and two brake vans. It was fitted throughout with the automatic vacuum brake. No wheels of this train left the rails, and the engine and carriages were hardly damaged at all.

Full details of the injury to rolling-stock will be found in the Appendix.
Description.

At St. John's Station, the main line of the South Eastern Railway from Tonbridge, Hastings, &c., to London joins the North-Kent line from Dartford, &c., and there are four lines of rails through the station, with three platforms, the up main line being on the south side of the railway.

The signal cabin is at the west, or up, end of the island platform between the up and down main lines, and the two adjacent cabins on the main line are Parks Bridge Junction Cabin, 1,140 yards in the direction of Tonbridge, and New Cross No. 2 Cabin, 330 yards in the direction of London. Between these cabins there is telephonic communication, and the line is worked on the block system, by means of Sykes electrical interlocking apparatus, i.e., the "lock and block" system has been adopted, but, as will be seen further on, not in a very complete form.

From Parks Bridge Junction to St. John's the up main line is on a curve to the left of about 21 chains radius, and it is on a falling gradient of 1 in 180 to near the home signal, the line then falling into and through the station at 1 in 217.

The following distances should be noted from St. John's Signal Cabin:

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The latter signal, it should be added, is on the same post with, and underneath, the up advance signal of Parks Bridge Junction.

Owing to the buildings on the station platforms, and to the curve of the main line, a train standing at St. John's up main home signal is out of sight of the signalman even in clear weather; a bridge carrying the London, Chatham and Dover Railway over the South Eastern Railway, about midway between the home signal and the outer end of the platform, also interferes with the view from the cabin.

The following particulars of the Hastings train may be of interest:

The weight of the engine is 42 tons 10 cwt., distributed in the following manner viz.:

| Leading bogie | ... | ... | ... | ... |
| Driving wheels | ... | ... | ... | ... |
| Trailing wheels | ... | ... | ... | ... |

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The tender has six wheels and a total weight of 30 tons 10 cwt. The whole of the wheels of the engine and tender, except the bogie wheels, are braked.

The six passenger coaches have each two four-wheeled bogies, and the two brake vans are six-wheeled vehicles.

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In the whole train, which weighed 244 tons 17 cwt., 223 tons 10 cwt., or about nine-tenths of the total weight, were thus on braked wheels.
As regards the Tonbridge train, the weight of the rear brake van is 9 tons 12 cwt. 3 gns., and the third-class carriage next in front of it, which was built in 1873, weighed 9 tons 12 cwt.

Evidence.

William George Honey states: I have been 15 years in the Company's service. I first commenced duty as a signalman about 1888, as a relief signalman at Penshurst, previous to which I had been a signal lad in various cabins all over the line, from 1895-96, about, I was employed as a passenger guard; and in January 1896 I returned to work as a signalman, at St. John's station, where I have remained ever since. I am 29 years of age. On the 21st inst. I came on duty at 6.15 p.m. to work until 6.15 p.m. My proper hours were from 8 p.m. to 10 p.m., but I took the other duty to oblige my fellow signalman—by permission of the station-master. I was not on duty on Sunday, having gone off duty at 8 p.m. on Saturday. The next cabin on the main line, on the down side of mine, is Parks Bridge Junction. We work a double block, on the Sykes, i.e.: "lock and block" system between these two cabins. The 7.45 a.m. train ex Tonbridge is due at St. John's at 8.48 a.m., at which station it calls; I was offered the train by Parks Bridge at 8.54, and I accepted it at once by plunging on my block instrument, which would show in the other cabin, on the block instrument, the words "free," thus allowing the signalman to pull off his starting signal for the train to proceed to St. John's. After plunging, I gave one ring on the bell to acknowledge his signal. At 8.55, the preceding "up" train was cleared back to me by New Cross No. 2 signalman, and I at once acknowledged and offered him the Tonbridge train, which he accepted. Then I pulled off all my signals, viz., home, starting, advance starting, and distant. There was a dense fog at that time, and I could hardly see the station-master, on the opposite platform, when he came down to the box to speak to me a little later. The fog was very variable. A man had gone back to his up distant signal, underneath Parks Bridge starting signal, to fog there, soon after 8 a.m. The signalman at Parks Bridge had put the fogman on duty there, and he informed me on the telephone of what he had done. I thought of calling out my fogman several times. At 8 o'clock it was quite thick, and 10 minutes later comparatively clear again. At about 8.50 the platelayer's gang came to me and I told them to go to their posts, and I believe the fogman was at my up home signal when the Tonbridge train arrived there. It must have been about 8.57 when the station-master spoke to me; he said "you have got a train outside," and I said "Yes sir, the 7 o'clock up Hastings." I also asked him if I might be allowed to draw the train in under the protection of the home signal—which he agreed to. At 8.57 I cleared him to Lewisham for an up train on the North Kent line, and I accepted another train on the same line at 8.55, which I cleared back at 8.57. My cabin is between the up and down main lines. The engines of stopping trains on the up main line can stand quite close to my cabin. According to the booking in the train register, I took book of my cabin, which was made up by boy Clews, I cleared back the Tonbridge train also at 8.57; previously to doing which I must necessarily have placed the up signals at danger. I had done this in the belief that the Tonbridge train had gone past. When I have accepted a train from Parks Bridge, my block instrument for that section is locked until I have put my home and starting signals back to danger; I am then free to accept a following train up to my home signal, and the latter can be lowered to let the train come forward to the starting signal. The starting signal cannot be pulled off a second time until the preceding train has passed over a trolley ahead of the advance signal. At 8.57, when I cleared back the Tonbridge train, the signalman at Parks Bridge offered me the 7 o'clock up express from Hastings, and I, of course, accepted it. It was when I had done all this that the station-master came to me. When I was throwing back the main line signals to danger, the lad said to me, "has that train gone up the main?" I said "Yes," and he added that he had not noticed it. Finding that New Cross No. 2 signalman was a long time clearing the Tonbridge train, I spoke to the signalman on the telephone, and he said it had not arrived. This would be after the boy had spoken. I said to him it has not cleared my trolley yet so I suppose the trolley has failed as it did on Saturday." The signalman was in the cabin on Saturday and knew what had happened then. I dealt with 14 up trains on the morning of the accident before the Tonbridge train, on the up main, and the trolley had worked all right. I got my key and released the electric lock on the up advance starting signal and I put it to danger, and then lowered my up homesignal. I could, however, have lowered the home signal without doing this. We are continually using the key in connection with shunting operations. The present box has only been in use about eight or nine months, and in the old box we had not got the "lock and block" system of working. We have a trolley on each of the two up lines, and the trolley on the up main has probably failed three or four times since we have had it; I do not recollect any failure of the trolley on the North Kent line. I was under the impression that the station-master at Ladywell found the fogman for my up home signal, and I presumed he would be warned to come out by the signalman at Parks Bridge.

Stephen Clews states: I have been about four months in the Company's service, as signal lad at St. John's station. My duties are to book all trains in the train register book, and I do this by watching the signalman and taking the time, etc., for myself. On 21st I came on duty at 6 a.m. to work until 2 p.m. The entry in the book as regards the 7.45 Tonbridge and 7 o'clock Hastings trains were made by me. At 8.57, I saw the signalman clearing back a train to Parks Bridge and accepting another train, and I asked him if a train had not cleared my line, he said "Yes," and he told me it was the 7.45 stopping train, and I so booked it. As a rule I see the train pass and then enter the particulars, to show what train it is, in my book; but sometimes I miss the train, and the signalman has to come to me and tell me what train it is. When Honey told me it was a stopping train which had passed, I said to him I was sure I should have seen a stopping train. He made no further reply to me, but I think he went to the telephone to ask New Cross if the train had arrived there. I know that Honey afterwards used the key to free the advance starting signal. I had not seen him use it previously that morning. The trolley had been
Walter Stevens states: I have been 22 years in the Company's service, 19 years a passenger guard. On the 21st inst. I came on duty at 5.15 a.m. I left Tonbridge at 7.45 a.m. for Charing Cross. There were 10 vehicles, including two vans, behind the train; one van was next to the engine and the other at the tail end of the train. The train was fitted throughout with the automatic vacuum brake. We arrived at Hither Green, the last stopping place, before St. John's, at 8.45—one minute late. We were kept waiting for the signal at Hither Green and St. John's, known as Parks Bridge Junction. Parks Bridge distant signal was at danger when we passed it; but the home was "off," and also the starting signal, when we got there. St. John's distant signal, underneath the latter, was at danger. I could not see any of those signals until we were within about 20 yards of them. I could not say whether the lamps were lighted, nor did I notice whether fog signal men were out. I was riding in the rear van. We came to a stand at St. John's up home signal about 8.56. At that time I could see about six or seven coaches along the train, but I could not see the home signal. We had probably stood there just over four minutes when the collision occurred. I was looking out of my window, on the left-hand side, when I thought I heard a train approaching on the up line, and when it was about a coach and a half from my van I saw the engine. I had my hand on the handle of the door and I sprang out at once, the collision occurring as I did so. My tender thaws at a stand alone. My hand brake was not on. The effect of the collision was to cause the van to telescope with the third class carriage in front of it. The only other wheels knocked off the rails were one pair of wheels of the leading van. The driver had whistled when we first stopped, and again about three minutes afterwards, a single long whistle each time. A signalman was riding in the van with me, and he jumped out after me. I had not worked the train for some months past until yesterday; but when I worked it before it was in an uncommon thing for us to be kept a couple of minutes outside St. John's station. The fog seemed to lift a bit while we were standing at St. John's, but we could not at any time see the signal. I am aware there is a rule which says the guard should satisfy himself, when a train is detained at a home signal, that the "man whose duty it is to do so has gone to the signal box;" but I do not consider it would have been possible for me to comply with the rule on this occasion. The signal might have been lowered while I was out of the van, and I might then have been left behind. We had a red tail light on the off side of my van, which was put on at Tonbridge.

Charles Armitage states: I have been a railway man for 40 years and station-master at St. John's for the last two years and nine months. At about 8.55, being on the platform waiting the arrival of the train ex Tonbridge, which was overdue, I went down to the down end of the platform; I could then hear an engine standing on the up main line blowing off steam. I could not see it on account of the fog. I went along once to the signal box, and I said to Honey, "Do you know you have got a train there?" He said "Yes," I said, "Why do you not let it in?" He said, "I have." He said nothing more. There is only one line between the platform I was on and the cabin. He answered me from the window, without putting his head outside. I have known Honey since he was a little boy, and I believe he is a thoroughly good man; I think he tries to work as faithfully as possible always. I went back to the outer end of the platform and walked down to the train. While still on the platform I heard the explosion of two detonators—on the main line, I believe. I was going to take the train in, but when I got to the engine I met the guard of the train, who told me something had run into his train. I had heard something, but it had not occurred to me that any accident had happened. Hearing that doctors were wanted, I went back to the station and sent for medical aid at once, and for the breakdown gang, &c. I asked Honey about the fogman, between 8 o'clock and half-past, perhaps, and he had then sent for them. The fog came on thick about 8 o'clock, I should say, just when I came on duty at the station.

William Barton states: I have been 18 months in the Company's service as a platelayer. I came on duty at St. John's at 6 a.m. on the 21st inst. There are four men and the ganger in my party. We do not fog for the up main home-signal at St. John's, the man for that signal comes from Tonbridge. On the morning of the accident fogging Parks Bridge down-distant signal which is close to the up main home-signal at St. John's; there was no fogman for the latter signal before the accident occurred. Previous to the accident I could not see the up home-signal more than 50 or 60 feet away. I should say the Tonbridge train stood at that signal for about 30 seconds. The driver whistled when he stopped first, one long whistle, and he whistled again about a couple of minutes afterwards. I had not looked to see whether the up-home was taken off at any time or not. I don't think any previous train that morning had been stopped at that signal, and I don't remember any train on previous occasions being stopped so long as this Tonbridge train was. I had no conversation with the driver or any of the train men before the accident.

W. G. Honey, recalled: There is a list in my cabin of the men to be called out for fogging duties, and among them is platelayer Piper; I was under the impression that Piper was up-distant, at Parks Bridge, and as the signalman there told me he had a man out, I assumed it was Piper and I did not send for the latter. I now find that Piper should have been on my up-home-signal.

Harry Dowal states:—I have been six years in the Company's service, a signalman about four-and-a-half years, and for 12 months past employed at Parks Bridge cabin. On the 21st I came on duty at 6.5 a.m. to work until 2 p.m. At 8.54 a.m. the signalman at St. John's accepted the 7.45 up Tonbridge train; I cleared that train to Hither Green at 8.56 and it was cleared to me, from St. John's, at 8.57. As a rule, in the case of a train stopping at St. John's it is not cleared back to me for two minutes, as the signalman there should see the tail lights of the train past his cabin before he clears back, i.e., the train should have passed through the platforms. I offered St. John's the 7 o'clock train ex Hastings at 8.54, which was cleared to me, cleared that train to Hither Green at 8.59, all my signals being off for the train. The accident must have happened as nearly as possible at
9 o'clock. I could not see St. John’s distant-signal, which is underneath my advance starting-signal, owing to the fog. All my fogmen were out, four near 6 o'clock and the other man from 8.30 (he is stationed at Hithe Green). The fog is generally denser at Parks Bridge than at St. John’s.

Richard Roberts states: I have been about 25 years in the Company’s service, and a driver nearly 16 years. On the 21st I came on duty at 5.30 a.m. to work until 8.30 p.m. My engine, No. 206, is a four-wheels-coupled tender-engine with leading bogie, the tender has six wheels; I left Hastings at 7 a.m., with eight vehicles behind the engine. We run through from Southboro' to London, but on this occasion we were stopped four minutes by signals at Grove Park; afterwards I found Hithe Green distant-signal at danger, the other signals there being off for me. At Parks Bridge all signals were “off,” except St. John’s distant-signal (underneath Parks Bridge advance starter) which was at danger. I ran over fog-signals at Hithe Green distant and also at St. John’s distant; I drive from the right-hand side of the engine, and St. John’s distant-signal is on the left side; I could not see it until I was right up to it. At that time I don’t think the speed would exceed 15 miles an hour. I had shut off steam at Parks Bridge distant, thinking there must be something in front of me owing to the signal at Hithe Green; I had not given the engine steam again before the accident occurred. I began to use the continuous brakes a little after passing Parks Bridge cabin, so that the speed would be further reduced as I ran forward towards St. John’s. I had seen nothing of the train ahead, nor of the home-signal, when my main signal called “Stop,” when I applied the brakes in full; I do not know what amount of vacuum I had available. Practically speaking, neither I nor my mate was hurt at all; no wheels of the engine left the rails. I should say the speed on striking was not more than eight miles an hour.

George Allen states: I have been 11 years in the Company’s service, two years a guard. On the 21st I came on duty at 7 a.m. to work until about 6 p.m.; I was the guard of the Hastings train; I rode in the rear van. I should say the speed passing Parks Bridge would be about 12 miles per hour. I notice that the brakes were applied on passing St. John’s distant-signal, and at that time the gauge showed about 13 inches of vacuum; the brakes had been applied again before the collision occurred. I should say the speed on striking was about seven or eight miles an hour. The collision threw me back on the coupling-box, but I was not hurt at all.

Frank Sawyer states: I have been eight years in the Company’s service, and a fireman four-and-a-half years. On the 21st inst. I was firing for driver Roberts, and my hours of work were the same as his. Passing Parks Bridge advance starting-signal, the distant-signal for St. John’s was at danger; we could only see it just as we got to it. I did not notice any fog-signals detonated there, but I saw the fog-signalsman. The speed passing that signal might be 20 miles an hour; I believe steam had been shut off; I do not think the regulator had been opened again before the collision, although I could not say for certain. Between Parks Bridge and St. John’s my driver used his brakes to steady the train, and the speed would have been reduced a good deal, say to eight miles an hour, before the collision occurred. I was not hurt at all. I think the first thing I noticed was the guard of the Tonbridge train jumping; I then saw the corner of his brake van; I called out “Stop,” I think. We had a white light on the right-hand buffer-beam of the engine.

Thomas Longley states: I have been 41 years in the Company’s service, 27 years a driver. On the 21st I came on duty at 6.45 a.m. to work until 4.45 p.m. I left Tonbridge at 7.45 to run to London. At Hithe Green we were stopped at the home-signal, but we were let into the station after a minute or so. Passing Hithe Green advance-signal, the distant-signal was to the danger, and we exploded detonators there. Parks Bridge home and starting-signal (only starting-signal) were all right for us, but St. John’s distant was against us. We again exploded detonators there. The home signal at St. John’s was at danger, and I pulled up there. I saw no fogman at that signal. We had been standing about two or three minutes, as I thought, when the accident happened. We have been there just as long sometime on previous occasions. I whistled as soon as I stopped, and I whistled again after two or three minutes. I am aware that when detonated at a home-signal in a fog the rule says the fireman ought to be sent to the cabin; but I was expecting the signal to be lowered every minute. It is only recently we have had a rule to the above effect. If we had been kept there five minutes I think I should certainly have sent the fireman forward. I should say we were knocked forward about 30 yards by the collision. I was knocked down on to my back, but only shaken a little. When I got up I noticed that the home signal had been pulled off. It was not pulled off before the collision; I was watching it carefully. My brakes were off the train at the time.

Frederick Piper states: I have been about 20 years in the Company’s service, a platelayer all the time. I belong to the Bromley gang. In foggy weather I go to the up main line home signal at St. John’s station, which I have done for about six years past. On the 21st inst. I came on duty at Bromley station at 7 a.m. I enquired at the signal-box whether there was any message for me to go to St. John’s, and was told they had not sent for me, so I went to my usual daily work. What I did at the time of the accident I have never left my post to warrant the statement that a train was standing outside, nor do I recollect any case in which the fireman was sent to the cabin. The driver usually whistles at intervals.

George Booker states: I have been 17 years in the Company’s service, all the time attached to the telegraph department, and for five years a lineman. On Saturday, the 18th, I went to St. John’s station, arriving there about 9.45 a.m., to fix two instruments, for describing the trains, in the station signal cabinet. While I was there my attention was called by signalman Hillery to a failure of the trolley on the up main line, which had just occurred, and he asked me to see to it. It was an intermittent, not a complete, failure, which proved to be due to a weak cell in the battery, which is in a box alongside the trolley. This was put right about 2 p.m., just when Hone was leaving duties on the main line, and gave me no trouble or any subsequent failure. The trolley was brought into use about the 1st July last. So far as I know, it had only failed twice previously to the 19th March, and both those failures were due to
the permanent way: they were not electrical failures.

Arthur Waters states: I have been nearly four years in the Company's service, as a plate layer. On the 21st March I came on duty at Parks Bridge cabin, and was sent to "fog" at St. John's Bridge signal, and was sent to "fog" at St. John's Bridge cabin, and was sent to "fog" at St. John's Bridge signal. When the 7.45 Tonbridge train passed, the fog was very thick; I could hardly see the signal 20 yards away. The distant signal was at danger as the train approached, having been put back when the train was not very far away; the train was, in fact, so near that I had to put the fog signals down rather quickly. Before this I should say the distant signal had been off for about two minutes. When the distant signal went back to danger Parks Bridge advance-station, which is on the same post and above the other, remained "off." When the Hastings train approached, the distant signal stood at danger, not having been lowered again after it was put back as stated above, but the advance was "off." The latter train was going faster than the Tonbridge train had done; but I heard the driver apply his brakes as soon as the engine passed over my fog signals.

Conclusion.

There is no dispute whatever as to the circumstances under which this sad accident occurred, signalman Honey candidly admitting his grave blunder in accepting the Hastings train in the belief that the preceding train (from Tonbridge) had passed St. John's, while, as a matter of fact, it was standing outside the station, at his up main line home signal, if, indeed, it had even arrived there at that time. An important feature of the case is that a "lock and block" system is in use on this portion of the South-Eastern Railway, the primary object of which is to prevent a signalman from making such a mistake as occurred on this occasion, and the details of the actual arrangements adopted require, therefore, to be very carefully considered. It is necessary, however, first to recapitulate the facts set forth in the evidence, dealing with the events leading up to the collision.

At 8.54 a.m. signalman Honey accepted the Tonbridge train, from Parks Bridge, and at 8.55, when the line ahead was cleared by the signalman in New Cross No. 2 cabin, Honey offered the Tonbridge train forward, in the usual way, and got it accepted at once. All the signals were then lowered for the up main line, viz., home, starting, advance starting, and distant. He had next to attend to the signalling of trains on other lines—there are four lines through the station—and it appears that at 8.57, after disposing of an up train on the North Kent line, he proceeded to throw back to danger the up main line signals also. The levers working the signals of both up lines are at the east end of the cabin, close together, and whether they were all put back in the frame inadvertently, or intentionally, seems to me to be open to some doubt; at any rate, shortly after having done so, Honey gave the "clear signal" to Parks Bridge and was at once offered the Hastings train, which he accepted.

From the evidence of the man in the latter cabin, it appears that the Tonbridge train passed into the section ahead about 8.56, and his train register book agrees with the St. John's book in giving 8.57 as the time when the same train was "cleared" from St. John's. The interval, one minute, is admitted to have been shorter than usual in the case of stopping trains, but it did not cause him to suspect that any mistake had been made, and in so short a section, with half-minutes not booked, it is difficult to draw reliable deductions from the times entered in the books. It is, however, important to notice the evidence of plate layer Waters, who was "fogging" at St. John's up distant signal, which is underneath Parks Bridge advance starting signal; this man says, positively, that the distant signal, which had been "off," was put back to danger just before the Tonbridge train arrived at it. The train had left Hither Green, the station before St. John's, seven minutes late, and the driver found St. John's distant signal against him, as explained above; on arriving at the up home signal, which had also been placed at danger, he brought the train to a stand, and, after standing there about three minutes, his train was run into rear, with the results already detailed.

The fog seems to have been very variable at St. John's during the early morning, but all the witnesses agree that when the accident happened it may fairly be described as being very dense. There was no fog signalman at the up, main line, home signal; plate layer Piper, who should have been there, having received no instructions to proceed to his post—through a misunderstanding on the part of signalman Honey. It is, however, only right to say that the absence of this man (Piper) apparently affects very little, if at all, the questions at issue, as the driver of the Tonbridge train was able to see the signal when he got near to it, and he pulled up his train just as he would have done had he exploded the detonators. Piper practically says if he had been there he would not have thought it
duty to leave his post to go to the signal cabin, although, seeing that he would have noticed
the signal being put to danger before the train arrived, I should have thought he must
have realized that something unusual had happened, and that some special steps required
to be taken to prevent the train being left standing outside the station. In any case, it is
perfectly clear that no arrangement for placing fog signals on the line from the cabin
could have done anything whatever to prevent the collision, but provision should be made
for indicating to the man in the cabin when a train arrives at the up main home signal,
it being, as described above, out of his sight there at all times. This point certainly
needs early attention.

The old rule of the South-Eastern Railway in reference to the working of trains in
the London district during a dense fog was:—“In foggy weather and during snow
storms, when a train or light engine has to stand on the main line out of sight of the
signalman, the driver must sound his whistle at frequent intervals to remind the signal-
man he is waiting. If detained an unreasonable time the guard nearest the signal-box,
or the fireman in case of a light engine, must proceed to the signal-box to remind
the signalman of the position of the train or engine.” The evidence goes to show that on
this occasion the driver sounded his whistle twice, while the detention hardly amounted
to an “unreasonable time” within the meaning of the rule. Since the 1st January, 1898,
the rule quoted above has been superseded by the following, under the heading of
“Detention at Home or Starting Signals,” which forms part of the rules agreed to
generally by the Companies parties to the Railway Clearing System, viz.:—“In case
of detention at a home . . . signal, the engine driver must immediately sound
his whistle, and, if still detained, the guard . . . or fireman must (except where
the lock and block system of train signalling is in operation) go into the signal-box
and remind the signalman of the position of the train. . . . In foggy weather,
or during falling snow, the guard . . . or fireman must, immediately upon the
train coming to a stand, proceed to the signal-box.” The latter part of the new rule
is worded in a manner which seems to be most explicit, but I doubt whether it is
always acted up to. The rules further specify that “the duty of going to the signal-
man must be performed, in the case of a passenger train with only one guard, by the
fireman ;” and they also say “the guard in charge of the train must satisfy himself that
the man whose duty it is to do so has gone to the signal box.” The difficulties in the
way of complying with the above are, not unfairly perhaps, given in guard Stevens’
evidence. Either the rules should be obeyed, or if they cannot be carried out they should
disappear from the rule book. It may, perhaps, be contended that the words “except
where the lock and block system of train signalling is in operation” apply—or are
intended to apply—to foggy weather, as well as to cases of detention in clear weather,
in which case the necessity for giving the train complete control over the block instru-
ments is at once apparent. I shall have to refer to this again.

When signalman Honey was going through the operations necessary to “clear” the
Tonbridge, and to accept the Hastings, train, the boy employed in the cabin asked him
what had become of the former train, which, as he very sensibly reminded Honey, he
could hardly have failed to see had it passed. A signalman working the instruments, or
the levers, has the up main line behind him, but the boy stands at a desk facing that line;
moreover, the engine of an up stopping train, on the main line, usually stands within a
few feet of the cabin. By this time, however, the signalman had so convinced himself, he
says, of the train having gone, that he paid but little attention to the boy’s warning!
Very shortly afterwards the station-master came to the cabin, and asked Honey if he knew
there was a train standing outside at the up home signal, at the same time telling him to
let it into the station. Honey’s version of the conversation does not quite agree with the
station-master’s recollection of what passed, but this is hardly to be wondered at under
the circumstances. The former, even then, says he did not realize that the train outside was
the Tonbridge train, but that he assumed the Hastings train had arrived. Before lowering
the home signal, to let the train into the station, Honey wished to put his advance
starting signal back in the frame, although there was no absolute necessity for him to do
so, and, as it turned out, had he taken off the home signal immediately the station master
spoke to him, it is more than possible that the first train might have got out of the
way before the second (Hastings) train had come on the scene. The electrical
arrangements of the “lock and block” system did not admit of a man putting the advance
starting signal lever to the normal position, after the signal had been once lowered,
until the train for which it was lowered had passed over a “treadle” ahead of the signal.
Honey thus found himself unable to do what he wanted, and this should have served as
another reminder to him that the Tonbridge train had not gone out of his section; he, however, at once assumed the "treadle" to be out of order, because it had failed at intervals on the previous Saturday; and he released the electric "lock" by using a key which is provided for the purpose. I should add that Honey had enquired of the signalman in New Cross No. 2 cabin whether the Tonbridge train had arrived there, when he found the "treadle" referred to above had not been actuated, and he was, of course, informed it had not arrived. By the time Honey finally lowered the home signal, to bring into the station the train then standing outside, the collision had occurred.

The Hastings train was detained for a few minutes at Grove Park station, the signals being against the train; the distant signal for Hither Green station was passed at danger, and, on arriving at Parks Bridge, the driver found St. John's station distant signal at danger; he thus received ample warning of another train being but a short distance ahead of him, and I see no reason to doubt that he kept his train well in hand. He estimates the speed at St. John's distant signal at 15 miles an hour, steam having been shut off some distance further back; after passing that signal, he says he used the continuous brakes to steady the train down the bank, and this is confirmed by other witnesses. It was only when they were almost into the Tonbridge train that his fireman, who first noticed the obstruction in front, called out to him, and the brakes were at once put hard "on." The unfortunate results of the collision were, in my opinion, due to the momentum of the very heavy Hastings train, and not to any excessive speed, and it was extremely fortunate that the train was exceptionally well braked and that the brakes were off the Tonbridge train at the time.

I do not think that the men in charge of either of the trains can be fairly blamed for the occurrence, taking all the circumstances into consideration.

In a book issued by Mr. Sykes on his system of interlocking railway signals and points with block instruments—generally known as the Sykes "lock and block" system—I find it stated, as a result of the adoption of the system, that (1) a signalman cannot forward a train unless his lever is first unlocked by the man in advance; and (2) he cannot accept a second train from the rear unless the first one has cleared his section. As regards (1), the arrangements in force at St. John's no doubt provide for this, but they evidently fall short of what is requisite to give the security contemplated in (2). The occurrence under consideration strongly confirms an opinion frequently expressed by the Inspecting Officers of the Board of Trade that the train should itself release the block instrument on passing over a "treadle" and going forward into the next section. At St. John's the release is effected by the signalman putting his signals back to danger, which does not ensure the train having passed. The somewhat reckless way in which the signalman used the key, to release the back-lock of his advance starting signal, also calls attention to a weak point in the system, although it must be remembered it was not done until after he had wrongly accepted the second train. I am distinctly of opinion that it should not be in the power of a signalman to use the key without permission from another box, and there are several plans which have been proposed, and tried, with this object in view; failing the adoption of one of these devices, the key should be so protected that it cannot be used without a record being left. I hope that the Company will take the necessary steps to improve upon the present arrangements, in respect of these deficiencies.

I have not thought it necessary to include in my report the instructions for working the "lock and block" system, in force on the South Eastern Railway, but I must point out that they include two important departures from the ordinary rules and procedure of block working, as adopted generally by the Companies parties to the Railway Clearing System. In the first place, the signalman at St. John's is permitted to accept a second train with "line clean," so soon as "he is satisfied that the preceding train with tail lamp has arrived at his block station and has passed on"; no margin of clearance is fixed, and the train may only be going forward to stand at the advance starting signal. It is, I believe, contended by the officers of the South Eastern Railway and others that the conditions of the traffic on many lines in the immediate neighborhood of London will not admit of the margin between trains, required by the Clearing House block rules, being given. No doubt the South Eastern Railway traffic has been carried on in the past with considerable success from the point of view of safety, and therefore I have no wish to say anything which might be interpreted as a severe condemnation of their block rules. I think it my duty, however, to point out that the essential element of a safe system of
block working is the preservation at all times of "an adequate interval of space between following trains," wide Board of Trade requirements. It is not enough to start a train with a clear block section ahead of it, there should still be ample margin for over-running signals when it arrives at the next box. The margin can, perhaps, be reduced when the sections are short and speed is invariably low (trains stopping at all stations), but on lines where express trains run I am unable to admit that any modification of the Clearing House rule is desirable, and the only inference I could draw from inability to work to that rule would be that, with the growth of traffic, insufficient provision had been made for carrying it.

The other difference between the South Eastern Railway "lock and block" working and the Clearing House absolute block system, consists in the omission to forward any "train entering section" signal. Had it been necessary to give this signal to the man at St. John's (from Parks Bridge) I believe the accident would not have occurred, for it would have been sent to him, for the Tonbridge train, just at the very moment when he was putting his signals back to danger, and his mistake must then have become apparent to him. I admit the "lock and block" arrangements, in complete form, go far to justify the signal being done away with, and the work in a busy cabin can be appreciably lessened by dispensing with it, but this occurrence shows there is a distinct advantage in giving a "reminder" to the signalman ahead when a train does not go forward immediately after it has been accepted.

In conclusion, I am obliged to say there is but little, if any, excuse for signalman Honey's most serious blunder. Although I do not consider the "lock and block" system adopted by the South Eastern Railway to be perfect, it undoubtedly furnished a considerable amount of protection against the liability to his mistake being made out of mere forgetfulness. He had been on duty less than three hours at the time the accident happened, and he was not on duty at all the previous day (Sunday); to which I should add he was taking another man's duty, under special circumstances and with the station-master's permission. At the coroner's inquest questions were, not unnaturally, asked as regards the man's fitness for duty, but the replies given by the Company's officers were, I think, accepted by the coroner and the jury as being entirely satisfactory. I have not the least hesitation in expressing my belief that there are no grounds for any doubt on that point, and I can further testify to Honey's readiness to give the fullest explanation in his power of all the facts of the case, and to the thorough knowledge he displayed of the working of a very busy, and important, signal cabin.

I have, &c.,

G. W. ADDISON,
Lieut.-Col., R.E.

APPENDIX.

PARTICULARS OF DAMAGE TO ROLLING STOCK.

7.0 a.m. up Hastings train.

286, brake van.—One buffer rod bent and packing damaged.
36, second-class car.—One buffer rod bent and casting broken.

7.45 a.m. up Tonbridge train.

302, brake van.—One headstock and stepboard broken, and two buffer rods and shackle of coupling bent, having been off the line.

2228, third-class.—End rail and end panel broken, and buffer rods bent.
1812, composite.—No apparent damage.
2014, second-class.—One quarter glass broken.
2020, second-class.—Three buffer rods bent.
1668, first-class.—Five quarter glasses broken.
1794, first-class.—One quarter glass broken.
1643, first-class.—Two buffer castings broken.
1690, third-class.—Body broken up.
288, brake van.—Body broken up.

Printed copies of the above Report were sent to the Company on the 9th May.