

Construction of the East Kent Railway bridge at Rochester, 1854--6

Times, 13 Aug 1855, p 8

FATAL ACCIDENT AT THE NEW RAILWAY BRIDGE, ROCHESTER.

ROCHESTER, Saturday Evening.

An accident, by which three lives were sacrificed, occurred this morning at the works connected with the railway bridge now erecting across the Medway in this city for the East Kent Railway Company. It will be necessary to explain that Messrs. Fox and Henderson, the contractors for this portion of the works of the line, have been for some months past pushing on the erection of the new bridge, in order that it may be completed at an early date, and simultaneously with some other portions of the railway. Accordingly, a large number of workmen have been employed in preparing the foundations of the bridge below the bed of the river for some time past. At the time of the accident a body of labourers and others were at work near the spot which will form the centre arch of the Strood pier, and it was here that the accident took place. The plan adopted for laying the foundation of the piers is to sink large iron cylinders, of about nine feet in diameter, and of great weight and thickness; several of these are sunk at spots selected, and these are braced together, forming a long, upright, hollow pile. The water is then pumped out, and workmen proceed down the inside to the bed of the river, where the soil is excavated to a great depth, the cylinders sinking with their own weight. The interior is then filled with concrete mixed with gravel, &c.; the whole forming a solid bed for the masonry.

This morning a number of workmen were employed in this description of work under the superintendence of Mr. Winder, the manager of the whole. For the purpose of saving labour, a large steam-engine has been erected on piles in the centre of the river, which pumps the water out of the cylinders. There is also a large diving-bell, weighing several tons, used. The men had made the descent in safety, and had sent up several "journeys" of soil, when, from some unexplained cause, the bottoms came out of the buckets, and the whole suddenly fell down inside the cylinders, carrying in their fall the stages inside, and also the bell, the whole mass weighing several tons.

At the time of the accident there were two men working inside, and, from the immense weight which fell on them, their deaths must have been instantaneous. Their names are Thomas Colvill and James Carter. One man who was working with the bell, named George Humphries, was also killed. The escape of some other men was most marvellous, one of them having a narrow escape by grasping at the upper staging.

As soon as the accident became known a number of men

were employed in removing the fallen staging, buckets, &c., but, owing to the great depth of the cylinders, and also the heavy mass thrown down, it was several hours before either of the bodies could be rescued. The first brought to the surface was that of Humphries, frightfully injured. The most active exertions have been made all day to recover the bodies of the other men, but up to this evening the men employed have only succeeded in removing a very small portion of the weight under which they are buried. What makes this labour the more difficult is, that the buckets were "weighted" with several hundred-weights.

An inquest will be held on the body of Humphries on Monday, when the cause of the accident will be fully investigated.

An accident also occurred to one of the large bells used on the Rochester side this morning, owing to the breakage of some portions of the connecting parts, but, fortunately, no person was hurt, although the bell is greatly injured.

The ceremony of turning the first sod of the East Kent Railway took place on Saturday at a field beneath Fort Pitt, Chatham, in the presence of Lord Sondes, Sir W. Cubitt, and other gentlemen, and the works are to be carried on vigorously. The accident of the morning, however, cast a gloom over the otherwise interesting ceremony.

Times, Tu 14 Aug 1855, p 12

THE FATAL ACCIDENT AT THE RAILWAY BRIDGE, ROCHESTER.

ROCHESTER, Monday Evening.

The inquest on the bodies of the three unfortunate men who were killed at the dreadful accident which took place at the new railway bridge on Saturday last was held at the Guildhall in this city, before Mr. James Lewis, the city coroner, and, after a protracted inquiry, was brought to a conclusion this evening.

The jury, having been briefly addressed by the coroner, went to view the bodies, after which they proceeded to inspect the locality of the accident, and also the cylinders, buckets, and what portion of the iron staging could be seen. In this they were occupied about an hour, when they returned to the Guildhall, and the following evidence was taken: --

Henry Johnson said, he was a labourer employed at the railway bridge, and had worked there one week only. He had never before been accustomed to that description of work. His duty was to turn the winch at the top of the cylinders where the work was going on for the foundation of the bridge. Three men always worked it, but there were only two there when the accident happened. There were four men below at work in the cylinders. A signal is given from below, when the buckets were required to be raised. They heard the signal and immediately began to wind up. The

buckets are fastened one above the other, and are about 18 inches deep. Witness had worked down in the cylinder for several hours. When the buckets were about halfway through the cylinder they heard a noise as of buckets falling, and then they stopped winding. He was quite sure no signal was given to stop winding. It was very dark and they could not see below. In about two or three minutes after the accident had happened one of the four men crawled up out of the cylinder, and told them that all the men below were killed. There had been no accident since he had been there before this.

Robert Howard deposed that he had been working at the bridge for about seven weeks. Sometimes he worked inside the cylinders and sometimes out. Was at work at the winch on Saturday morning with the last witness. He had the whole management of that part of the works, and directed the raising and lifting of the buckets. About 10 o'clock on Saturday morning they were engaged drawing up the buckets, and had lifted them to about a foot from the surface when they heard them fall. The weight of each bucket would be about 2 cwt. They were fastened to each other by means of a "cotter," or pin, which could not work out because of the great weight. Two men were at work half way down, on the iron stage; their duty was to see that the buckets did not foul while passing through into the tubes. There were three apertures in each cylinder -- one for the full buckets, another for the empty ones, and the third for the men to use. The whole depth of the cylinders was 63 feet. The accident was caused by the breaking of one of the iron buckets, which caused the whole to give way, carrying the staging and buckets to the bottom, and killing the three deceased men -- Humphries, Carter, and Cole. Never heard anyone say the mode of working the cylinders was unsafe. The weight of the buckets, exclusive of the stage, would be about three tons. Witness had worked in the cylinders for 12 hours a day for a whole week. All that time he was working under pressure.

John Layton, a man of colour, said, he had been working on the bridge about a fortnight. At the time of the accident he was at work inside the cylinder on the stage, with George Humphreys, one of the deceased. Their duty was to guide the buckets, and to give signals. While they were steadying a bucket through the opening, they suddenly heard a crack above them, and the whole of the buckets came down. There were more than 20 buckets altogether. In their fall they struck down the staging, and knocked Humphries, the other man, to the bottom. Witness saved his life by jumping to the empty buckets, up which he clambered. He afterwards went down and found that the handle of one of the buckets had broken, which caused it to come away from the spindle. He went down voluntarily to that description of work, although he did not like it. There were weights all round the staging to keep it down.

By Mr. Bassett, who attended on the part of the relatives of the deceased men. -- On Thursday one of the handles of the buckets broke off.

Thomas Broom deposed to finding the bodies of the deceased men, Humphries on Saturday, and Carter and Cole on Sunday.

Mr. W. J. Mills, resident engineer of the railway company, deposed, that the foundations were being built on what is termed the pneumatic method, which is quite a modern invention. Up to this occurrence no accident had occurred. He believed this was the first bridge where the system of working by a continuous chain of buckets had been used. It was perfectly safe. Each bucket, with its contents, weighed about 2 cwt. The weight of the whole rested on the top pin. The pins were capable of sustaining a weight of four or five tons. He had no doubt, from the examination he had made, that the accident was caused by the side of one of the buckets giving way. The weight of the staging, which was loaded with weights to keep the cylinder down, was about five tons. The staging was examined from time to time. He did not consider that mode of working dangerous.

Mr. T. Winder, manager of the works for Messrs. Fox and Henderson, gave similar evidence, and considered that everything was perfectly safe, and the accident caused by the breaking of the side of the iron buckets, which were made of iron of 3-16ths of an inch in thickness, and riveted with 7-16 rivets.

The learned Coroner then addressed the jury, who retired to consider their verdict, and, after being absent a long time, returned a verdict of "Accidental Death," with a recommendation to alter the present cylinders.