

Derbyshire Times.

Saturday 7th. June 1856

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Accident.

An accident occurred on Thursday night in a coal-pit, at Lockoford, to a collier residing at Stonegravels, named Elijah Briggs. While being drawn up the shaft, after quitting work, he incautiously placed his left arm out of the "corfe" in which he was being drawn up, and becoming entangled in the chain, it was broken. Under medical care, he is now progressing favourably.

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Eyam Mining Company.

This spirited Company gave their workmen a feast of roast beef and plum pudding, at the Bull's Head Inn, Eyam, on Saturday, the 31st. ult. About 70 men and boys sat down to dinner at one o'clock. After the cloth was drawn Mr. G. Maltby was called to the chair and Mr. W. Dam to the vice-chair, and a series of toasts followed. The principal toast, proposed by Mr. Edward Turner, was "Long and continued success to the Eyam Mining Company", which was heartily and vociferously responded to. A great variety of other toasts proceeded, accompanied by appropriate remarks. Some excellent songs were given, and much enjoyment during the afternoon. It was exceedingly gratifying to see such unanimity, such reciprocal good feelings, exhibited amongst so great a number of workmen, as was manifested on this occasion. The chairman and vice-chairman's healths having been drunk, the company separated in good time, evidently well pleased with their treat, and experiencing much satisfaction.

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Colliery Explosion - Twelve Men Killed.

A destructive explosion of firedamp has occurred at the Ynsdavid Mine, one of the extensive collieries owned by the Governor and Company of Copper Miners in England, at Cwmavon, Glamorganshire. A portion of the mine has been long in a dangerous condition, and unusual precautions against disaster have been taken. Struve's patent ventilators had been fixed, and the men had been liberally supplied with safety lanterns, and strictly charged not to enter the workings with any naked lights. The cause of the explosion can only be conjectured; but at about ten of the morning, and at a time when 60 or 70 hands were at work in the pit, the men who were working above ground became sensible that an explosion had taken place. Some of the men immediately descended the shaft, and found that the scene of the catastrophe was the Big Vein, all the men working in which, 12 in number, were killed. They appear to have been suffocated. Many of the deceased had left wives and families, and the deepest distress has been caused by the catastrophe.

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Accident at the Hady Pit.

On Tuesday afternoon an accident occurred at the Hady Pit, near Chesterfield, by which one of the colliers, named James Duffy, was severely injured. It appeared that some portion of the pit-gear had become deranged, and on Duffy attempting to put it right, he was caught by the machinery and suffered dislocation of the hip joint. He was removed to his home in Chesterfield, where he is now progressing favourably.

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Fatal Boiler Explosion, at Whittington, near Chesterfield.

Whittington was thrown into a state of great excitement on Monday morning by a terrific report, the shock of which was felt for a considerable distance. Contemporaneously, a shower of bricks, boiler and engine materials, mingled with steam and smoke, was seen high up in the air, falling in perfect showers. The explosion was that of a boiler at the colliery of Messrs. Wharton and Sons, which proved fatal to one poor fellow, several others narrowly escaping death. This colliery has been at work for two years. The coal being found near the surface is worked by a "adit", or day-level, instead of a shaft being sunk, the colliers making a heading or tunnel to the natural stratum formation of the coal. On the floor of the tunnel is a single line of rails, the coals were drawn up an incline by an engine, situated about 40 yards from the mouth of the tunnel. At about half-past eight o'clock, George Holmes, the engine-tenter was engaged at his duties in the engine house, and a young man named Joseph Cook was lighting his pipe at the engine house fire when suddenly the boiler exploded, dashing the unfortunate men from the spot, hurling into the air a blackened mass of materials, and leaving the engine house a perfect wreck, scarcely a brick being left upon another. At a distance of from 15 to 20 yards from the scene of the catastrophe was found the lifeless and mutilated body of poor Cook, who had only just arrived on the spot to apply for work. The body presented a frightful aspect, almost every bone appeared to have been broken, and the features of the poor fellow were scarcely recognisable. Holmes, the engine-tenter, was found about 15 yards from the engine house, severely wounded, and it was feared, at first, that he had met with the same fate as Cook; life, however, was not extinct, and hopes are entertained of his ultimate recovery. The banksman, who was unloading a wagon of coals when the explosion occurred, had a very narrow escape, pieces from the machinery falling so close to him as to damage the wagon with which he was engaged. Another man miraculously escaped, and a man who was working on the road, a short distance off, although the falling debris was scattered thickly about him, fortunately sustained no injury. Never was a more complete destruction than that of the engine house, the greatest part of which was actually blown into an adjoining field, whilst bricks and tiles were found at a distance of 300 yards from the spot. The force of the explosion may be conceived from the fact that a portion of the boiler, weighing upwards of 12 hundredweight was found in a clover field belonging to Mr. Pearce, having been carried a distance of exactly 236 yards and a foot. One end of the boiler was found in a corn field, belonging to Mr. Pearce, 300 yards and 3 feet from the engine house, and the other end weighing one hundredweight was carried into Mr. J. Staniforth's grass field, a distance of 213 yards and a foot. Another portion of the boiler was found in Mr. Hancock's field, having been propelled a distance of 108 yards 3 feet, and a large plate, to which two valves was attached, was found a distance of 150 yards from the engine-house, in Mr. Pearce's corn field. The whole of the boiler, plates, etc., have since been collected by the constable, by whom the distances have been ascertained. We have little doubt as to the cause of the explosion, but to express an opinion at present would be premature, the mighty equivalence of the minds of the jurymen who, it is expected, will conclude their investigation of this disastrous affair on Monday next.

On the evening of the explosion an inquest was held at the Bulls Head, Whittington, upon the body of the deceased, Joseph Cook. Only one witness was examined, and the enquiry was adjourned till Monday next.

Wm. Drew, a miner residing in Newbold Moor, on being sworn, deposed as follows; About a quarter past eight on Monday morning I was in the cabin, about 40 yards distance from the engine house, I saw the deceased, Joseph Cook, standing in front of the door. About a minute afterwards, I heard a great explosion, which was caused by the boiler exploding and blowing the engine house, etc., to pieces. I went up to the engine house about five minutes after I saw Cook about 15 or 20 yards distance from the engine house, lying upon a heap of coals. On going up to him I found he was quite dead.

Just before going to press we received a favourable account of Holmes, and it is expected that he will be able to give evidence at the inquest on Monday.

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No Headline.

The miners strike in the West of Scotland is at an end, the men having agreed to return to their work.

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Colliery Accident.

At the Hady Pit, near Chesterfield, on Tuesday, while two of the colliers, named Paul Coates and Joseph Lenthall were engaged in firing a shot into a part of the pit for the purpose of freeing it from unpure air, a spark fell upon a quantity of powder near which Coates and Lenthall were standing. An explosion immediately ensued, and the two men were severely scorched about the face and neck. They were conveyed to the hospital, where their wounds were dressed, and they are now recovering.

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Petty Sessions, Saturday.

Before J.G. Cottingham, and E.G. Maynard, Esqs. - George Barton, a collier, employed at one of Mr. Barrow's collieries, at Staveley, was charged by Mr. D. Cooper with having used a naked light in a dangerous part of the pit, contrary to the Act of Parliament, by which he rendered himself liable to a penalty of two pounds. Mr. Busby, who appeared on behalf of the plaintiff, stated that he was instructed not to press the charge, merely to make this case act as a warning to others. Barton was fined 2-6d. and expenses, the magistrates intimating that if similar cases were brought before them in the future they would impose the full penalty. - John O'Neill, charged with stealing several pieces of brass from the Clay Cross Company, was acquitted, the charge not being proved against him. Mr. Busby appeared for the defence.

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Sudden Death.

On Monday evening, Mr. Ashton, mineral steward to his Grace the Duke of Devonshire, was found dead in bed, having died suddenly from disease of the heart. The deceased was much respected, and his demise is regretted by a large circle of friends.

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Accident at Speighthill Pit.

On Wednesday an accident happened to a miner named William Cresswell, residing in Derby Lane, who having incautiously ventured with a naked light into a part of the pit now seldom worked, an explosion took place, by which he was severely burned about the head and face. Another of the colliers was slightly injured.

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Caution to Colliery Proprietors.

On Saturday last, at the Petty Sessions, for the Hundred of Scarsdale, held at the Memorial Hall, before J.G. Cottingham and E.G. Maynard, Esqs., Mr. John Clayton, of the Tapton Colliery, appeared to answer five summonses charging him with neglecting to comply with the new colliery regulations. Mr. Clayton pleaded guilty, and one information at his request was withdrawn. Mr. Busby, who conducted the case for the Government Inspector, said the rules and regulations in question were instituted for the purpose of protecting human life. These were the first informations under the Act, and for that reason he was instructed not to press for the full penalties; indeed, with the exception of one case, the prosecutor only asked for a nominal fine. He hoped, however, that the case would be a warning to other parties. The first information was for neglecting to give notice to government of the death of an unfortunate collier named Kidger, in that case the discrimination of the Bench was between a fine of £10 and £20. As a conviction was pressed, a fine of £10 was inflicted; the other charges were for breaches of the rules, and nominal fines were inflicted with costs, which were paid. At the conclusion of the case, Mr. Busby said that he had been instructed to state that in all future cases the prosecutor would press for the extreme penalties.

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Fatal Accident.

A sad accident occurred on Wednesday morning last at Springwell Colliery, in the parish of Staveley, belonging to R. Barrow, Esq., by which a boy about twelve years of age, named Thomas French, from the neighbourhood of Eckington, lost his life. It appears that he was about to descend into the pit to commence work, about six o'clock, and was in the act of stepping into a chair, by which the men are raised and lowered, when, melancholy to relate, his foot slipped off the edge, and he fell from the top to the bottom of the shaft, a depth of between 100 and 200 yards, being completely dashed to pieces by the fall. The body on being picked up, presented a frightful spectacle. The boy's father-in-law and brother were at work in the same pit at the time the accident happened, whose feelings on witnessing the sadly mutilated remains of the poor boy were of a most distressing kind. The machinery of the pit is of the completest description possible, and the accident arose from want of sufficient caution on the part of the unfortunate lad himself.

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Saturday 28th. June 1856

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The Fatal Boiler Explosion.

Inquest at Whittington.

On Monday last the adjourned investigation into the late disastrous boiler explosion at the colliery of Messrs. Wharton and Son, was continued at the Bull's Head, Whittington, before Mr. Coroner Busby. Mr. Hedley, the Government Inspector of Collieries, was present, and cross-examined the witnesses.

The first witness called was the engine tender, Geo. Holmes, who was so far recovered as to be able to be removed to the inquest, in order to give his evidence. On being sworn he said: - I am an engine tender, and have tented the engine for Messrs. Wharton and Son ever since it was put up. The first engine, I tented was at Duckmanton, where I was upwards of thirty years. When I left there I tented Mr. George Smith's engine, and I continued in Messrs. Wharton's service when they took to the place. I was working for Smith at the same place. When Wharton took it from Smith I was asked to continue, and I did. I have tented it for about two years. I put the boiler up myself, and did all that belonging to it when it was first put up.

By Mr. Hedley: - I never tented engines regularly until I came to Smith's. I do not know what pressure I worked at, I should think about 60 lbs. I had no indicator to tell me what the pressure was. We were not at work on Saturday. I got steam up on Wednesday morning, and pumped the boiler full of water on Friday night. I did not get steam up on Sunday. I came in Monday morning and got steam up, and I went on the boiler and tried the float; the water was above working heat. I then went to the incline mouth, and asked if they were ready, and they said they should not be ready for some time. I then went back and pumped some more water into the boiler. I then took the pump off and put the chain on. I worked the engine, pumping perhaps half an hour. When they were ready I drew about twelve waggons of shale up.

By the Coroner: - The reason I took the chain off was that no more water could get into the boiler. There was only about another waggon to draw up, a waggon of dirt, and then we were going to draw the water out of the pit to supply the engine. We draw it up to feed the engine. As to the explosion I have no knowledge of it.

By Mr. Hedley: - I had run the engine down again to bring the last waggon up. I was sitting waiting on an old chest beside the engine in the engine-house, and when I came to my senses after the explosion, I did not know it had taken place: I thought I was still sitting on the chest waiting for the last waggon, as I was before the accident.

By the Coroner: - I have since been at my own house at Chesterfield, not in the hospital. I remember Cook, who was killed, coming on the bank. I did not know him. When I first saw him I was running a tub across the bank. He came on the bank and asked for work. After I had run the waggon down I never saw him again.

By Mr. Hedley: - Just before the explosion Cook was standing against a little wooden box, about 15 yards from me and from the engine-house. On the Monday morning I came to work at about half-past four. The fire was under the boiler from Friday until Monday. The fire will keep in a week if nobody touches it, but not at any heat much. The engine would run six or

seven hours without fresh feed, and there would not be more than six inches from the top of the boiler to the water below, it would lower about a foot in six hours. We were bringing up about thirty loads per hour. I do not know how many strokes it makes to bring up a load. It was working on the first motion. The drum is perhaps a foot in diameter, and the length of the incline is about fifty yards. The length of the drum is about four feet. I do not know the size of the cylinder. I should think it is about six inches, and the length of the stroke about nine inches. If the boiler was full in the morning I could work until night. I clean the boiler once a month. I never noticed the rabbit heads being very bad, I noticed that they were eaten a little a month ago. Messrs. Wharton told me next time I looked at it to let them know how it was. I had no knowledge of the plates being so thin - the boiler not having done so very much work since it was new. I knew the water was not good ever since I began. The boiler was two years old. The water was not good because it was "ochrey", and the brass valves could not stand it, for it eat them same as worms eating wood. It would eat them, so that they would not work in two days. In consequence of this we had fresh metal. When it eat the valves in that way I was not frightened about the boiler; I was not aware it was eaten also, as it has been represented to me it was done. I do not know that we had had more than one set of brass valves. We faced them again several times, but finally got another sort of metal. I should think we got the brass valves up about a dozen times in the twelve months. I went into the boiler once a month, but I did not notice anything wrong. We have a brass slide valve which did not want facing often; it was faced about two months since. We had an iron force pump, and at some odd times the plunger had to be turned afresh. This pump worked through a packed studding box. I could get steam up in the morning in about a hour. I am the salesman as well as engine tender, and had a machine near the engine, the beam of which was in the engine house.

Mr. Hedley; Now I should like you to be very ????? with regard to the feeding of the boiler, it is most important we should know the real fact of the ????? as regards that point. Did you ever leave the ????? night, low?

Witness; I never did , Sir. I have always been in the habit of filling it at night.

Mr. Hedley: The only reason I ask you that question was because I know for a fact, that I have had men under me who have been in the habit of doing so, in order that they might as soon get steam up the next morning. I only wanted a candid answer from you.

Witness; Well Sir, I can assure you I always put the pump on and pumped it about six inches above the regular working height. I always filled it up at night, for fear of anything happening.

Mr. Hedley; There are two holes in the boiler?

Witness; Yes, Mr. Wharton put two lead plug-holes in, so that they would melt out before anything could happen by the boiler being short of water. I have not seen the boiler since the explosion.

Mr. Hedley; Do you know that some of the plates are no more than a sixteenth of an inch thick?

Witness; I have heard so.

Mr. Hedley: Do you not think that if you had examined the boiler carefully you could have discerned that.

Witness: I had no idea of it.

Mr. Hedley: If water will eat brass, it will eat iron - such things ought to be examined more carefully.

In reply to a question from a juror, it was explained that the water was brought in buckets out of the incline and then put into a pit beside the engine, from thence it was pumped into the boiler.

Mr. Hedley observed that there was no doubt a reserve of water in the system.

By the coroner - Witness: I have now no knowledge what caused the explosion.

Mr. Hedley: Not even when you consider the plates had been eaten down to a sixteenth part of an inch?

Witness: No Sir.

Mr. Hedley: Do you not know that the water you use makes iron short like cast iron?

Witness: I know it eats it, but I did not know that it caused any danger.

Mr. Hedley: I wish you had been a little more cautious.

Witness: The water has been clearer lately, and I thought it had got better, but it appears to have got worse, judging from the accounts I have heard of the boiler. The boiler never leaked.

The Coroner: Whose duty was it to do the repairs of the engine?

Witness: Messrs. Wharton told me to tell them when anything was amiss, and they trusted to me to see to anything that was to be done, and I considered that my duty.

Thomas Wright, collier, Newbold Moor, was next sworn and examined by the Coroner. Witness said: I saw Cook come onto the bank on the morning of the accident. He asked for work. I told him we were full, and wanted no assistance. He was not a stranger to me. I knew him quite well as a neighbour. After I told him we were full he left me, and I did not know but that he was going away from the place. He put some tobacco in his pipe, but I did not see him light it. I did not see him afterwards alive. I saw him go towards the engine-house. It was half-past eight, or twenty minutes to nine when the explosion happened, and Cook was on the bank about a quarter of an hour prior to that. He was talking to me only a short time, just while I turned a waggon over. I went on to the bank, and whilst I was setting a waggon on the road the explosion took place. I was not more than a score yards off at the furthest. I received a blow on the head, and did not know what was the matter. I ran into the cabin, and asked what was the matter, for I really did not know what was amiss. We stood talking about two minutes about Cook and George Holmes, when I again ran out, but was obliged to go back again - bricks were falling then.

Mr. Hedley: Bricks could not be falling after you had been talking two minutes.

Witness continued: I should think it was about two minutes. We then went in search of Cook, and found him fourteen or fifteen yards from the engine-house, quite dead. Holmes was laid amongst the bricks, perhaps thirteen yards from the engine-house. The engine-house, boiler, and everything, were blown all about in confusion.

By Mr. Hedley: I had nothing at all to do with the engine and do not profess to know anything about engines.

William Drew, the man referred to by the last witness, as being in the cabin was next examined. His evidence, however, was only a corroboration of the testimony of the previous witness.

Joshua Hunter, of Whittington Moor, engine driver was then sworn and deposed as follows: I have been acquainted with engines for about twenty- nine years and a half. I have been employed both in fitting, pulling down, putting up, repairing, and driving engines. I was on the spot about forty minutes after the explosion at Messrs. Wharton's colliery. I saw the various parts of the boiler. The first piece I saw was the large piece in the clover field more than 200 yards from the engine house. Another piece was found in a wheat field, belonging to Mr. Pearce, about 150 yards off. I did not see any other parts except the beam and valve which I gave to Mr. Edge, the Whittington schoolmaster. Another piece of the boiler, I believe was subsequently found in Mr. Pearce's field. I have examined the various pieces. The boiler was 13 feet and 3 inches long, and the diameter was about 3 feet 2 inches. My report, as to the original thickness of the plate, was about 3-8ths. Two plates, fire plates, are vert deficient, one of them is only 1-16th. thick. That which I imagine was over the fire on the centre of the boiler bottom was only 1-16th. thick, but the adjoining plate was 1-8th.

The jury then went to view the boiler plates, when three water marks were pointed out to them by the last witness, and the government Inspector, who showed to the jury the state of the metal, which, from the effect of the water used, had become so brittle as to snap like cast iron.

By Mr. Hedley: Witness continued: Where the plate is only 1-16th. of an inch thick it would be near one of the plugs pointed out, and at the edge of a fracture up the boiler side horizontally. The pipes generally were not lying in the same direction. For instance, the north end of the boiler went northwards, and the south end went east. The other portions went in a north-easterly direction, more of the fragments went south or south-west. Judging from what I have seen of that boiler, I should say the explosion was caused through a deficiency of water. I think that is the great cause.

By the coroner: I found three water lines in the boiler indicating the different levels that the water had stood at. The lowest level was six inches above the bottom of the boiler. I mean from the lower part of the bottom, the boiler, of course, being cylindrical. The next mark is 22 inches and the third 28 inches from the bottom. The horizontal fracture ran parallel with the lowest water mark.

By Mr. Hedley: In my opinion the accident was occasioned through the want of water. There is no other cause unless the safety valves were confined, or they might stick; they are liable to stick if they get corroded, as they work in a socket. I am not prepared to say what the pressure was. Wharton's said it was 50lbs. to the square inch. taking it for granted that it was 50lbs., there might be other causes for its bursting, there being plates only one sixteenth thick. I don't say, if the water had been sufficiently high, it would have burst in consequence of those plates; it might have heated and scalded them a little, and let the water out, but not to cause an explosion, and sweep the whole piece away. By an explosion I mean blowing up. My boilers have burst and let the water out, but, if well supplied with water, they do not blow up. But if I was to run them down to about six inches, I should consider myself in danger.

Mr. Hedley: Can you give us an opinion as to what would be the reason of the plate you mention decreasing in thickness to the 16th. of an inch, and what pressure it would resist?

Witness: I am not prepared to say what pressure it would resist. I cannot conscientiously say. The quality of the iron does not appear to have been bad, but it has been rendered bad, I suppose, by expansion, and other causes, perhaps the effects of the explosion.

Mr. Hedley: What strain should you say these plates would give to 50lbs. pressure - the two plates together? The strength of those plates would fortify an opinion as to the overstraining of the plates. I want to know what strain there would be upon an inch in breadth of the boiler by 50lbs. pressure?

Witness: I cannot say. I have not practised such things, and am therefore unacquainted with that branch, which few practical men study.

By Mr. Wharton: I have never known a boiler worked to be considered safe at that pressure with such plates. I have seen boilers worked thinner than that, but they have blown up and exploded. I have worked an engine when I have actually swept holes through the boiler with a besom, but there was a thick scurf on it, and we had good surface water. Of course it was unsafe.

Joseph Wharton, Spital, engineer, was then sworn. He said: I make steam-engines, but not boilers. I am one of the proprietors of the colliery, and of the engine and boiler.

By Mr. Hedley: The colliery rules were sent to the Secretary of State a week before the accident happened. There were two safety valves to the boiler, but not a steam indicator. We worked at 50lbs. pressure. I cannot now give the decimal calculation of the area of the valves, but they were about four inches. We had a 20lb. weight hanging on the lever 5.25 inches diameter; the weight was cast iron, and hung from the fulcrum about 25 inches. The valves are 2.25 inches. We never calculated to pressure more than 20lbs.

Mr. Hedley: You have seen that boiler, what is your opinion as to the cause of the explosion.

Witness: Had I been called as a disinterested witness, I should have given it as my opinion from the effect of being short of water; but from hearing the evidence, I believe it is impossible to form an opinion. I have read several extracts from different works, Fair???'s amongst others, and they all show other causes. I should not think a boiler with plates of the thickness of the 16th. of an inch, safe to work at the pressure we worked, but still I believe the plates would bear a pressure of something like 100lbs., on the inch to bear them, supposing the iron to be tough and good iron, if the plates have been reduced as described, by corrosion, I could not speak as to the pressure they would resist, that is a matter for experiment, and even then the results might be different to anticipation. I gave instructions to the engine-man to let us know if anything was wrong, and stop until it was put right.

Mr. Hedley: Your engine-man was speaking just now about the safety- valves being eaten.

Witness Holmes: I did not mean the safety-valves, I meant the valves belonging to the pump.

Mr. Hedley: The feed valves you mean?

Holmes: Yes. I did not understand that we were talking about the safety-valves.

Mr. Wharton, continued: I have had my attention drawn to the fact of the feed valves being eaten, and it has struck me that the water that eat those valves would also eat the boiler, and I have asked the engine- man what was the state of the boiler, and he said he did not see anything amiss with it. I said, next time you clean it let me know, and I will come and look at it. It was repaired last on the 20th. October. The largest quantity of coals we have raised has been 15 tons a day. I had no idea that the boiler was so thin. As regards the water marks in the boiler, I could not

I should consider that mark to be where mud had stood up to that point.

Mr. Hedley: But if there had been only half that quantity of mud would not the plates have been burnt more?

Witness: They might have been, but it is a matter of opinion; it is impossible for me to say, as the boiling water would of course boil the mud up, and after the engine had done working it might settle down on the bottom again, and there might on the surface be some acid which might eat the plates. Supposing that mark to have been made by mud, as I have described, it would depend on the state of the water whether it would accumulate between the time of the cleaning. It might have done so under certain circumstances.

The Coroner: What are those circumstances?

Witness: It might accumulate after a shower of rain, for instance, washing a quantity of mud and dirt into the well. I am not aware that this has been the case - I only surmise it. I thought Holmes a competent man to attend to an engine; he was employed before we took to the place, and we saw no reason to change him. After hearing his evidence I have no means to think otherwise, as I do him the justice to think that the plates must have gone very much since he last cleaned the boiler. I have never been in the boiler myself since it was repaired.

Mr. Hedley: The reason for asking these questions is principally that it should go forth to enginemen - the necessity of using every care.

Witness: And I am very glad to give you any information for that purpose.

Mr. Hedley: It is a very important matter. I do not consider pit water suitable for engines. I mean the water you have used.

Witness: I would just add that the whole of last summer we did not use pit water. We carted water from the river below, because there was no water in the pit, so that for a considerable portion of the time the boiler has not been subjected to the action of pit water.

Some interrogations from Mr. Hutchinson, a juryman, elicited that before being erected at Whittington, the boiler had been lying for three months near the wharf. If it contained water during that time, Mr. Hutchinson suggested that that might account for one of the water-marks. Mr. Hedley, however, explained that such a mark would soon be obliterated by the action of fresh water, and a new mark formed.

Mr. Hedley then addressed the jury as follows: I have examined the boiler, and you have seen, as well as myself, that there is a very thin plate which, at the place I pointed out to you, is only 1-16th. of an inch in thickness. I think some of the witnesses corroborate me in this statement. We have it in evidence that the boiler has been worked at a pressure of 50lbs. on the

square inch. Now these plates, one 16th. of an inch in thickness, if in good order, and in as good a condition as they came from the manufacturer, would bear a weight of something like 3,500lbs., about a ton and a half upon them without breaking. But you would see, by my striking the metal, that it was short, so that it would not of course in such a state bear that weight. The 50lbs. pressure would show a strain on the same breadth of better than 1000lbs. For this strain of 1000lbs., it had strength to resist 3000lbs., if in a good state. It was not, however, in a good state, and without experiment it would be impossible to say to what extent it has deteriorated. The probability is, that it has decreased in strength by corrosion, and eating pretty nearly to the strain on the boiler, and from some cause or other may have been - but first I may say, all the same as to their being water or not, there was sufficient strain to tear the plates, from the deterioration of the iron; and once getting vent at 50lbs. on the inch, it has torn up the boiler, the steam has been forced out against the solid masonry in the ground, and there has been a sudden expansion which has carried the boiler away in the opposite direction to the fracture. Generally the boiler fell the other way, showing to my mind that that was the first point of fracture. Therefore, I think, the bad water which has been used, has eaten the boiler away, assisted by sulphuric acid, with which the water is no doubt impregnated, deteriorating the quality of the iron, which has not had strength to resist the pressure and hence the explosion - or the water may have been low, and if so, the fire getting to the plates which were only one 4th. or 5th. their proper strength, it would have power to rent the plates, carrying that destruction and havoc which it has unfortunately created in this case. It is quite clear from what we see, that the water must have been bad, to eat the boiler in the way it has done; and I should like it to go forth from you gentlemen, the great necessity of proprietors of collieries using caution in the sort of water they make use of, especially if they get it from some pits where it has flowed through old workings, carrying with it sulphuric acid in great quantities. Generally after a dry season, old pits are full of sulphuric acid, and great caution ought therefore to be observed in using water which has flowed through old workings. I must refer to another important point, a want of capacity, or carefulness, on the part of Holmes. He may be an experienced man, but not in engines. It is only in the last few years that he had been regularly connected with engines. Although he cleaned that boiler out every month, and although the valves had been eaten by this water, it never appears to have struck him that the boiler must also be eaten. Going into that boiler he might have seen that such was the case; and I think he has shown a want of care. I do not wish to be hard, but really when lives are at stake I think it shows a want of care, and I should like enginemen generally to take a lesson from this melancholy accident. I do not know that there is anything more which I would say to you. If any gentleman has a question to ask, I shall be glad to answer it as far as I am able.

The coroner then, at considerable length, directed the jury as to their verdict, which was, that "On the 9th. day of June, 1856, in the parish of Whittington, deceased Joseph Cook was then and there struck by a fragment of an iron boiler, which boiler then and there exploded from the pressure of steam then generated, and being within the said boiler, and the said fragments so striking the said Joseph Cook, then and there inflicting divers mortal wounds and bruises on various parts of the body of the said Joseph Cook, of and from which said wounds and bruises the said Joseph Cook then and there died".

Derbyshire Times.

Saturday 28th. June 1856

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The Late Fatal Pit Accident at Staveley.

An inquest was held last week at Handley, on the body of Thomas French, a boy aged about ten years, who was killed by falling down the shaft of the Springwell Pit, near Staveley, on the 18th. inst., when about to step into the "chair", by which he and others were about to be lowered. After the examination of several witnesses, who proved that the boys death was quite accidental, the jury returned a verdict of "Accidental Death".

Derbyshire Times.

Saturday 28th. June 1856

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No Headline.

On Monday morning next, a train, for the special use of working men, employed at the Staveley Works, will start at any early hour from the Chesterfield Station. In the evening, another train will be provided for the purpose of conveying the workmen home. The fare will be only one penny either way; the accommodation thus afforded will no doubt be appreciated by those for whom it is provided.

Derbyshire Times.

Saturday 28th. June 1856

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No Headline.

On Monday an inquest was held before Mr. Busby, in the White Swan Inn, on the body of Paul Coates, colliery labourer, who died on Saturday last from the effects of an accident which he sustained at the Hady Pit, on the 18th. inst., the particulars of which appeared in our last impression. The jury returned a verdict of Accidental Death.