

### Correct sequence of statement cards

1. Joseph Ryan was a miner. He worked in a 'colliery', which is a coal mine.	2. Miners were sometimes called pitmen.	3. Joseph Ryan worked at Montague Colliery's View Pit, also called Montagu Old Pit.
4. Montague View Pit was in Scotswood, to the west of Newcastle.	5. Joseph's job title was 'rolleyway man'.	6. Joseph's job was to look after the underground railway in the colliery.
7. There is often gas trapped below ground in a coal mine.	8. If gas comes into contact with a 'naked flame' it can cause an explosion.	9. A 'naked flame' means a light that is not enclosed or covered.
10. It can be very dangerous to go underground with a naked flame, as you might find gas there as well as coal.	11. 'Caution boards' were put in tunnels where there was might be trapped gas.	12. Pitmen were told that if they were going beyond a caution board, they had to use a 'safety lamp' and test the tunnel for gas.
13. A 'safety lamp' stops a flame from setting fire to any gas around it.	14. On 9 <sup>th</sup> December 1891 Joseph was asked to bring some old rails out of the pit.	15. The rails had been left in an unused tunnel, beyond a caution board.

16. Gas had collected in the tunnel where the rails were, but no-one knew about that.	17. Joseph went to collect the rails with Thomas Halliday, who was 17 years old.	18. Joseph carried a safety lamp* and Thomas had a 'midgy' lamp, which had a naked flame.
19. The flame on a 'midgy' lamp is not enclosed, so it can be dangerous if there is gas anywhere around.	20. Joseph knew he ought to test for gas when he went beyond the caution board.	21. It seems Joseph did not check the area was free from gas before he let Thomas follow him.
22. Soon after 7 p.m. the men working above ground felt a sudden shock.	23. When they went to investigate, they found there had been an explosion underground.	24. The explosion had killed Thomas right away. Joseph was badly hurt. He died next day.
25. The verdict at the inquest was 'accidental death'.	26. We will never know why Joseph did not make sure there was no gas.	27. The accident showed how important it is to observe safety rules.

\*A note about safety lamps

For fire to occur there must be a source of ignition, fuel and oxygen. If all three are present and in close proximity, then the fire risk could increase as a result. In coal mines there is a high risk of fuel (i.e. trapped gas) being present along with oxygen (in the air). Naked flames are therefore hazardous.

Safety lamps are an ingenious invention. By covering a flame with metal mesh, the heat of the flame is dissipated, thus reducing the likelihood of an explosion when the flame comes into contact with gas and air.



Inspector's report, copied from Durham Mining Museum website – [www.dmm.org.uk](http://www.dmm.org.uk)

**Date:** 9th December 1891

**Colliery:** Montagu Main, Old Pit

**Cause:** Explosion of gas

**Lives Lost:** 2

#### Description

On the evening of 9th December an explosion of gas occurred at the Old Pit, Montagu Main Colliery.

It appears that a certain district in the Five Quarter or Low Main Seam had been laid off about three weeks before, and on the evening in question the two deceased were sent in by the overman to bring out some of the rails from the siding on the out-bye side of a "caution" board, beyond which naked lights were not allowed to pass when the district was working. Between 7 and 8 o'clock a shock was felt, and it was found that an explosion of gas had occurred, and that Holliday was killed and Ryan seriously injured. Two lamps were found at this point, one a safety-lamp and the other an open torch lamp, at the latter of which the explosion no doubt originated.

An inquest on the body of Thomas Holliday was held by the county coroner **Mr. J. R. D. Lynn**, on the 11th December, and by adjournment on the 17th December, when the following evidence was given, as reported in a local paper :—

This afternoon, 11th December, Mr. J. R. D. Lynn, coroner for South Northumberland, held an inquest at the Rokeby Arms, Scotswood, respecting the death of Thomas Holliday, a youth aged 17 years, who was fatally injured through a gas explosion in the Old Montagu Pit, Scotswood, on Wednesday night. The man, Ryan, who was also injured, died on the way to the infirmary.

**Thomas Rowell**, a stoneman at the colliery, said that on Wednesday night he was in the pit working in the Main coal. Between 7 and 8 o'clock he heard a shock. The air was changed ; it was the shock of the air, and he knew something had happened. He volunteered to go and examine the places, and took a boy with him. He put a shirt over his face, and ventured to where Ryan was lying and moaning. He was in the siding. The boy that was with witness said, "I am getting dizzy ; you had better go no further." He felt overcome himself, and, after shouting "Hallo" and getting no reply, he said, "There is somebody dead," and he returned back. He got assistance and went to the spot again, and sent Ryan away. The man was unconscious, and was afterwards sent to the infirmary, and he had since died. They made a further search, and found Holliday. The lad was quite dead ; he was "sore damaged" about the head, but he (witness) was so much overpowered that he did not take much notice. The deceased would not be much burned, but would probably be killed by the shock.

**Inspector's report cont....**

**James Hutchinson**, overman, stated that on the night of the 9th he sent Holliday and Ryan to pull up some rails at the out-bye side of the "caution" board in the cross-cut way. It was a place that was done working, and they wanted the rails up. They went in at 6 o'clock. Ryan was in charge of the work, and was a rolley-way man. He was an experienced pitman. The "caution" board was put up to stop anyone going beyond the board with a naked light. The man and boy had one safety lamp and a naked light. He could not swear they had a safety lamp, but they found one after the explosion. About 8 o'clock that night, from what he heard, he went back to the pit, and found an explosion had occurred. He found that the deceased had been killed and Ryan injured. Everything was going right before he left, about 4 o'clock. The ventilation was all right then. He had never seen gas in that district of the pit, and he had been overman nearly five years.

**John Hall**, a miner employed at the colliery, said he was one of the men's representatives, and had worked in the district of the pit where the accident happened for about four years. He had never during that time seen any gas, and the ventilation was always good. He was quite satisfied there was no blame attached to any of the officials.

The Government Inspector said that he had tried his best to find out how the accident had happened. He had been down the pit three times, and was satisfied that there had been an explosion of gas at the point where the deceased was found. Neither he nor anyone else would ever be able to say where the gas had come from that caused the explosion. The jury found that "Deceased was accidentally killed by an explosion of gas in the Montagu Old Pit on the 9th instant, and that there was not sufficient evidence to show how the explosion occurred."

The deceased Ryan, who had been rolley-way man in that district for some years, and was well acquainted with it, was for that reason sent off to get out the rails. He ought to have examined as he went in, but his confidence in the place and its presumed immunity from gas rendered him careless. It was his duty to examine the place before allowing the boy with the open lamp to approach.

This accident again demonstrates the danger of using naked lights. It also shows the necessity of definite instructions being given by those in charge of every case where any work is to be done near old workings.

Source: *1891 Mines Inspectors Report (C 6625), Newcastle District (No. 3) by J. L. Hedley, H.M. Inspector of Mines, Page: 9*