

prompts the inquiry, cannot something be done to avoid it. This is a matter worthy of careful consideration and investigation. It has been demonstrated that where the conditions are favorable, flushing culm into the mines prevents caves of large area, and at the same time permits the securing of a much greater percentage of the coal.

On May 16, was called to Pottsville to consult with Inspector John Maguire regarding the illegal and unsafe condition of the Marion colliery. Repeated efforts having been made by the Inspector to induce the officials of the colliery to comply with the plain provisions of the law, and no attention having been given to his request, it was deemed prudent to advise the Inspector to apply to the court for an injunction restraining the Marion Coal Company from further operating their mine until the law was complied with and the mine placed in a safe condition. The evidence in the case was heard before Richard H. Koch, A. L. J., on June 20, 21 and 22, and he granted the injunction. A full account of the proceedings, also of an arbitration case with the same company appears in the report of John Maguire, Inspector of the Eighth Anthracite district.

On September 24 I received from Governor Hastings a telegram which read as follows: "I desire that you immediately visit scene of mine disaster, Umpire coal mine, Brownsville, Pa., and make thorough and complete investigation and advise me thereon. Please acknowledge."

On October 5, after making a full and complete investigation, assisted by Mine Inspectors Louttit, Blick, Connor and Callaghan, I made the following report:

Governor Daniel H. Hastings, Harrisburg, Pa.:

Dear Sir: Referring to your telegram of the 24th instant advising me of the accident whereby eight men lost their lives in the Umpire mine, situated on the Monongahela river near Brownsville, and requesting me to proceed at once to the scene of accident, investigate same and make a full report, agreeable with your request, I hereby submit the following as the result of my investigation:

I left here on the first train west arriving at Monongahela City on Sunday forenoon. On Monday morning I went to Brownsville and before entering the mine I made an inspection of the fan, which was located some two miles from the mouth of the mine. When I arrived there I found everything locked up and no one in attendance, although the fan was in motion though running very slowly. In a short time a man came and unlocked the door. I found that steam was generated at the bottom of the shaft, 144 feet from the surface; that the fan was operated in a sort of hit or miss fashion, and under the immediate care of a thirteen year old boy; that the fireman at the bottom of the shaft, aside from his duty to keep up suf-

ficient steam to operate the pumps and fan, had to attend to certain valves, some of which were located as much as three-quarters of a mile from the boiler, and that during his absence the steam often ran down to a point insufficient to properly operate the fan. In this connection I learned also that the Mine Inspector, some time previous to the explosion, had posted up, in accordance with legal requirements, a notice stating at what hours the fan should start and stop. Notwithstanding this notice, the superintendent, John Simpson, gave orders for the fan to be in operation two hours less each day than stipulated by the Inspector, and on several occasions the men were allowed to remain in the mine when the fan was not in motion for hours at a time. On my visit to the fan, I heard that it had been stopped on Saturday, the 24th, at 4 P. M., and had not been started again until Monday, the 26th, about 11.30 A. M., notwithstanding the large quantity of gas in the mine. In the afternoon I made an inspection of the mine, especially that portion where the accident occurred, known as entry No. 10. Everything remained just as it was after the explosion. I found gas in room No. 10 about 30 feet in from the entry, and gas in every room up to 22, which was the last room on the entry. Judging from the condition of the mine, the explosion was of small magnitude, as little damage was done to the mine, showing beyond question that only a small portion of the accumulated gas exploded. This theory is further sustained by the evidence of those who examined the bodies, stating that some of the bodies were not burned at all, and they did not think that the apparent injuries to those who were burned were sufficient to cause death, showing that death resulted from the deadly afterdamp.

On Tuesday, the 26th, the continued inquest of the coroner was resumed. In view of the fact that no record of the evidence previously given had been kept, the coroner had the witnesses re-examined, when stenographic notes were taken of all the evidence. After a careful inquiry into the cause and circumstances connected with the accident, the jury rendered the following verdict:

Brownsville, September 28, 1898. We find that John Bennett came to his death by an explosion of gas in entry No. 10 of the Umpire mine, on Friday, the twenty-third of September, between the hours of seven and nine A. M., and our verdict is that had the proper mine officials, whose duty it was to remove the danger that was known by them to exist, properly fulfilled their duty, the accident would not have happened, and this is our finding.

This verdict applies to all the others. I agree with the jury that the mine officials were to blame for the accident. The superintendent knew there was gas in the mine. The mine foreman knew also of the danger, the fire boss so reported it to him, but in their zeal to get out more coal, they allowed the men to work in a dangerous place, resulting in the accident as above stated.

The superintendent stated that while he had been for twelve years financially interested in coal mines, he knew nothing of their management. At the same time, he signed the mine foreman's record book without examining it, directed the operation of the fan, controlled the operation of the mine, hired the mine foreman, and allowed him to take charge without even showing him the mine map. This is only one of many cases where the superintendent directs the operation of the mine, gives orders and shares none of the responsibilities. I am sorry to say that this maintains to a greater degree than it should. There are men who invest their money in mines and who, from a somewhat limited acquaintance with the present condition of the industry, imagine the management of a mine is an occupation which anyone without former experience in the business of mining is capable of managing. No greater mistake can be made than the appointment of a man as mine manager simply because he may be a good accountant, a relative, or a warm personal friend. It should be impossible for any others than those who had passed a satisfactory examination in the science and practice of mining, to hold positions as mine managers. This would be better for the miner, the operator and the State. It should be remembered that the health and safety of the miner, the cost of production to the operator and the saving of the coal, adding to the wealth of the State can only be looked after successfully by men familiar with the principles of the sciences connected with mining, and who have acquired the ability to apply those principles by practical experience. I do not consider the method of mining at the Umpire mine the best for the safety of the employes, nor is it the best that could be adopted for securing the greatest portion of the coal. Wide rooms are driven and narrow pillars are left. The rooms cave in and the roof breaks off at the pillar, the pillars sustaining the strata immediately above them, the result of which is that large cavities are left in the caved rooms in which large quantities of gas accumulate, which is always a menace to the lives of those employed in the mine. And again, by this method nearly one-third of the coal is left in the mine, whereas, if it were all removed it would allow the superincumbent strata to all break down, and in many cases allow the gas to escape to the surface.

I will have a copy of the evidence taken at the coroner's inquest, which I attended, and when it is received, should you desire any further information in this connection, I will be pleased to furnish it.

Trusting this so far will meet with your approval, I have the honor to be,

Your most obedient servant,

ROBERT BROWNLEE,
Chief of Bureau of Mines.

There is now on file in this office a transcript of the evidence, made from the stenographer's notes taken at the inquest. Immediately after the coroner's inquest, Mine Foreman James Broderick, Fire Boss Henry Farrer and Superintendent John Simpson were arrested and taken before a justice of the peace, when Superintendent Simpson gave bail in \$600, Mine Foreman James Broderick \$900, and Fire Boss Henry Farrer \$300, for their appearance at court. At the March term, 1899, before the grand jury of Fayette county, the said James Broderick and Henry Farrer pleaded nol contendere, substantially the same as guilty, and on the March 21, Mr. Simpson took substantially the same as guilty, and on March 21, Mr. Simpson entered the same plea.

The charges against Mr. Simpson are specifically "ordering and directing, permitting and allowing the engineer, or those in charge of the ventilating fan, to stop the fan contrary to the terms of the written permission of the Mine Inspector of the district; for counter-signing the record book of the mine foreman of the mine without reading and examining the matter entered in the book."

The first count was nol prossed and in the second, a motion to amend indictment with order to file motion in arrest of judgment filed.

Owing to the many inquiries for maps showing the location of the coal mines of the State, together with the necessity of showing the position and area of each inspection district, maps of the several districts have been made and inserted in the report of each inspector. The colored lines bound each district; the number on the maps show the location of each colliery and the corresponding numbers in table 1 gives the names of the colliery, by whom operated, in what county located, the name of superintendent, his post office address and the name of the railroad to mine.

Reports of the Anthracite Miners' Examining Boards Received at this Office.

Plymouth, Pa., January 30, 1899.

Report of the Miners' Examining Board for the Fourth district for the year ending 1898.

Districts.	Certificates.	Price.	Amount received.
Wilkes-Barre,	77	\$1 00	\$77 00
Plymouth,	103	1 00	103 00
Nanticoke,	114	1 00	114 00
Total,	294		\$294 00