

## THE EXPLOSION AT FRANKLIN NO. 2 MINE

On Sunday afternoon, October 31, about 3.15 o'clock, an explosion of dust occurred in the Franklin No. 2 mine of the Cambria Steel Company, near Johnstown, by which 13 employes were killed and many injured. The Inspectors of the Second, Fourth, Fifth, Tenth, Fourteenth and Twentieth Districts were at once instructed to accompany the District Inspector, T. D. Williams, to the scene of the disaster to examine into the conditions and make a report to the Department.

Franklin No. 2 mine is a non-gaseous mine and has been worked as such from its inception, every person working therein having used an open light. Yet in this mine, which is considered and in fact is a safe mine, 13 persons were instantly killed by an explosion due to the recklessness of two men, who in face of instructions to the contrary used dynamite in blowing the coal from the solid when it should have been mined with the pick.

The report of the Inspectors, the verdict of the jury and a map of a portion of the mine are printed herewith.

## REPORT OF INSPECTORS

“Johnstown, Pa., November 3, 1909.

Hon. James E. Roderick,  
Chief of Department of Mines,  
Harrisburg, Pa.

Dear Sir:

Upon learning of the accident at the Franklin mine and in accordance with your instructions, we, the undersigned Inspectors, proceeded to the scene of the explosion, reaching there the same evening and the following morning.

Upon our arrival there we found that the rescuing parties, including Inspector T. D. Williams, had removed all the dead and injured out of the mine. There had been at work during the day some twenty-eight persons, who were employed in different parts of the mine laying track, timbering and others driving an entry. The accident resulted in the death of thirteen persons, two having died since the explosion, and two others are in a precarious condition in the hospital.

The opening is a drift mine penetrating the “B” or what is locally known as the “Miller” seam of coal, and the workings are developed on the double entry system of mining. The main tunnel is driven some five thousand feet from the entrance to the mine, on a course south 37 degrees and 10 minutes east. To the left of the main tunnel and at right angles thereto, main entries are turned to the left at a distance of 1,200 feet apart. The cross or parallel entries are turned at right angles from the main left entries. The mode of mining is room and pillar, the rooms being turned on 60 foot centers and driven about 25 feet in width.

The seam of coal averages about three feet and eight inches in thickness, but owing to a fault or dislocation the seam is reduced in thickness until in some of the entries it is only twelve inches thick, or even less. This faulty condition of the seam is quite evident in the area covered by the 4th and 5th left main entries.

The mine workings are quite extensive and the product of the mine is hauled by electric motors on the main tunnel and main left entries, the voltage of the current being 250. The seam is mined by pick; compressed air is used for drilling in rock and for pumping. The mine is ventilated by a Sturdevant fan ten feet in diameter and has a capacity for producing a large volume of air.

On Monday afternoon, the day following the date of the explosion, we made a careful examination of that part of the mine known as the 4th left entry. We entered the mine on the main tunnel and proceeded along this passageway until we came to the 4th left main entry. Turning into the latter entry we traveled forward to a point where the 5th and 6th parallel entries are turned, at which point we discovered the first evidence of the force of the explosion. From this point inward to the face of the 4th left entries we found debris on the roadway, electric wires torn down, air pipes broken and the stoppings blown out from between the 4th left main entry and parallel and thrown to the main entry, indicating that the force had traveled out both entries.

Upon entering the 11th parallel slant, which had been driven about 120 feet from the 4th left main entry, we found that three shots had been fired in the face of the entry, and upon inquiry learned that two men had been working in this entry on the day of the explosion, who were severely burned, resulting in their death, their bodies being found near this point. This entry was being driven nine feet wide. The coal seam was only twelve inches thick and was being blasted from the solid by the use of dynamite. Owing to the depth and direction of the drill-holes into the solid coal and, no doubt, excessive charges of dynamite, only the front of the holes was dislocated, leaving the back of the drill-holes remaining to a depth of from twelve to eighteen inches. The coal dislocated by the blasts was pulverized into fine dust, and, as we believe, the shots were fired simultaneously. Much heat was produced, together with compression by the blasts. The concussion threw the fine dust into suspension, and the temperature of the flame from the blasts was of sufficient intensity to ignite the floating particles of dust, thereby distilling the gases out of the coal which, in turn, were instantly ignited by the flame of the dynamite.

We, therefore, are of the opinion that the explosion was started by the blasts in the 11th slant parallel. We are also of the opinion that if the coal had been properly mined and a permitted explosive used the explosion would not have occurred. The portion of the mine affected by the explosion was very dry and dusty, but the area covered by the explosion was not very large, the force of the explosion being arrested by a body of water lying in the No. 10th parallel entry off 3rd left main entry. This water absorbed and reduced the intense heat, which was so evident in the dry portion of the mine, and, no doubt, extinguished the flame, there being no evidence of heat beyond this point.

In our examination we found no evidence of fire damp, and we are of the opinion that none was present to play any part in the explosion, but was the result of careless and improper method of blasting without undercutting the coal and the use of flaming explosive.

In order to reduce the liability of such accidents occurring in the future, we offer the following recommendations, which, we believe, if strictly carried out, will better secure the health and safety of the employes in mines of a gaseous or dusty nature:

1st. That permissible explosives be used exclusively in all parts of the mine where blasting is required to be done, and that all shots be stemmed with clay or other non-combustible material, and that all shots be charged, tamped and fired by competent shot-firers employed for that purpose, and that batteries be used for firing all shots.

2nd. That all coal be undermined before blasting, and where the seam thins down to such an extent that blasting it is impracticable, then the whole of the seam should be removed by pick or machine before the bottom is blasted.

3rd. That in all parts of said mine where coal dust has accumulated to a dangerous extent, care should be exercised to prevent said dust from floating in the atmosphere by sprinkling it with water, or otherwise, as far as practicable.

4th. That locked safety lamps be used exclusively in all pillar work and other places in or through which fire damp may be carried in the air current.

We are of the opinion that if the above mentioned safeguards are introduced and properly applied, together with rigid discipline and a strict compliance with the law, no fear of a repetition of this disaster need be entertained. Our experience in the past has proven to us conclusively that we have the necessary safeguards at our command to protect life in our mines, but we are very sorry to say not the necessary legislation to enforce their use in their entirety. Upon recommending them on our visits to many of the mines we are often confronted by a reply from the officials and others that the law does not require them, regardless of the fact that they are and have been in use in many mines for years, and their continued use is sufficient proof of their value for safety. Therefore, we are of the opinion that it is only a question of their introduction and proper use by the operators and officials in order to prevent a repetition of many of the late disasters such as have occurred in some of our mines in the bituminous region.

Respectfully yours,

THOMAS D. WILLIAMS,  
6th Bituminous District,  
C. B. ROSS,  
2nd Bituminous District,  
ELIAS PHILLIPS,  
4th Bituminous District,  
I. G. ROBY,  
5th Bituminous District,  
JOSEPH WILLIAMS,  
10th Bituminous District,  
DAVID YOUNG,  
14th Bituminous District,  
NICHOLAS EVANS,  
20th Bituminous District."

## Verdict of Coroner's Jury

"We find that the parties named came to their death in Franklin Slope No. 2, a coal mine owned and operated by the Cambria Steel Company, a corporation of the State of Pennsylvania, located in Conemaugh township, at 3 o'clock and 7½ minutes P. M., on Sunday, October 31, 1909, as the result of an explosion of coal dust, caused by the igniting of an overcharge of dynamite at the face of the eleventh parallel slant off of fourth left heading. We are of the opinion that the responsibility rests with the common practice of blasting from the solid, as was in vogue in said Franklin Slope No. 2 prior to and at the time of said explosion.

George E. Hamilton, Conrad Bader, George Lavelly, John Woodchak, W. C. Flick, Ivan R. Linton, J. C. McMillen, per H. B. Mainhart."

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REMARKS CONCERNING THE PROPOSED BITUMINOUS MINE LAW THAT FAILED OF ENACTMENT IN THE SESSION OF 1909, WITH A COPY OF THE LAW

The remarkable increase in the production of bituminous coal in Pennsylvania in recent years and the consequent changes in mining conditions have added materially to the difficulties and dangers of operation. The recognized inadequacy of the existing laws to meet the greater demand for safeguards on behalf of the workmen and for the protection of property resulted in the passage, by the Legislature of 1907, of a resolution authorizing the Governor to appoint a Commission of five persons to revise the present laws governing mining operations in the bituminous region. The resolution reads in part as follows:

"Resolved (if the House of Representatives concur), That the Governor of the Commonwealth be and he is hereby authorized to appoint a Commission to revise the present bituminous mine laws of Pennsylvania; the said Commission to be composed of five members, two of whom shall be selected from among the operators of the eastern and western sections of the bituminous region, and two from among the mine workers of the eastern and western sections of the bituminous region (from a list to be submitted by the mine workers), and one who shall be a person versed in the art of mining and who has no pecuniary interest in the operation of any coal mine in Pennsylvania.

The said Commission is hereby authorized to select an attorney to assist them in the work of revision, and also a stenographer, both of whom shall be paid from the said appropriation of fifteen thousand dollars.

The said Commission shall hold its meetings in Pittsburg, where all persons who are interested in the revision of the said bituminous mine laws may appear and give expression to their views. The said Commission shall have the right to call into consultation any persons who, in its opinion, may be able to give information that will assist in the work of revision.

The said Commission shall make a report of its deliberations to the next Legislature, which will convene January, 1909."

Under this resolution the Governor, after careful consideration, appointed as representatives of the mining interests George W. Schluederberg and Robert A. Shillingford, two mine managers, one from Pittsburg and one from Central Pennsylvania, men who were at the time and are now directing two of the largest corporations in the bituminous region. As representatives of the miners he appointed Francis Feehan, President of District No. 5, United Mine Workers of America, located at Pittsburg, and William Currie, President of a local district of the same organization in the central part of the