

WORK OF THE MINE INSPECTORS

During the year they spent 3,402½ days inspecting mines; 121 days inspecting machinery and plants; 403½ days investigating accidents; 85 days attending inquests; 1,084½ days at office work; 24½ days inspecting maps and plans; 587½ days in consultation on mining matters; 18 days in consultation on legal matters; 92 days traveling on duty; 124 days on sick list; 105 days legal holidays; 43 days attending court; 6½ days at mine fires; 170½ days on Mine Foremen's Examining Boards; 20 days attending mine inspectors' examination; 28½ days attending funerals; 2 days on account of deaths in families; 100 days on vacation; 41 days on private business; a total of 6,459 days, or 308 days a year for each of the 21 inspectors.

ACCIDENTS

The accident record for 1915 was comparatively a good one, being very close to the remarkable record of 1914 when the number of fatalities was the lowest for several years. There were 1,030 fatal accidents in 1915 as against 1,013 in 1914, of which 588 occurred in the anthracite region and 442 occurred in the bituminous region. The year 1914 had the exceptional good fortune to pass without any great catastrophes, while the year 1915 was marred by three serious explosions of gas and dust, one in the anthracite region and two in the bituminous region, by which forty-one persons were killed.

In the seventh anthracite district an explosion of gas occurred at the Prospect colliery of the Lehigh Valley Coal Company, February 17, by which thirteen persons were killed.

A brief history of this catastrophe is given herewith.

EXPLOSION OF GAS AT THE PROSPECT COLLIERY

The Prospect Colliery of the Lehigh Valley Coal Company is situated in the Seventh Anthracite District, Luzerne county, Inspector T. J. Williams.

An explosion occurred in the Red Ash vein, No. 10 slope of this colliery at 12 o'clock noon, February 17, causing the death of thirteen men and boys. This catastrophe was caused by a rush of coal in chamber No. 3 by which a body of gas was forced down on the naked light of a miner who was sitting at some distance from the face.

The report of the inspector of the district, T. J. Williams, is printed herewith together with the verdict of the Coroner's Jury. Immedi-

ately after the explosion an examination was made of the mine by Inspectors S. J. Jennings, Joseph J. Walsh and D. T. Davis in company with Inspector T. J. Williams.

The reports and inquest relating to the case are printed herewith, together with a tracing of the mine.

REPORT OF INSPECTOR T. J. WILLIAMS

On February 17, 1915, a disastrous explosion occurred in the Red Ash vein of the Prospect colliery at No. 10 Slope, at about 12.00 o'clock, noon, causing the death of 13 men and boys, 8 of whom were instantly killed, 1 died the same day, and 4 died the next day.

When I arrived at the shaft I was met by Thomas Thomas, General Mining Superintendent. We went inside to the scene of the accident and were informed that all of the dead and injured had been taken outside, with the exception of Daniel Souchak, laborer, who was still missing. He worked in chamber No. 4, road No. 788. We made a diligent search for the body, but it was not found until the next day, Thursday, at about 5.00 p. m.

The Assistant Foreman in making his usual morning examination found each and every place in this vicinity clear of gas and in a safe condition to be worked. At about 12.00 o'clock, noon, a rush of coal occurred in chamber No. 3 and forced a body of gas down on the naked light of John Lacavitch, a miner, who was sitting at his box 175 feet from the face, causing the explosion.

The force of the explosion traveled through the heading of No. 4 chamber, down chamber No. 3, through heading to chamber No. 2, into chamber No. 1 and down chamber No. 1, destroying in its path all walls, doors, brattices and stoppings. This force was also expended through chambers No. 5 and No. 6 to the reserve pillar. Inside of the reserve pillar, while considerable damage was done in the destruction of walls and brattice, it is apparent that the force exerted in this section was not as destructive as that outside of this pillar. This was due in a large measure to the fact that the force found a resistance too great, owing to the few openings through the reserve pillar, and its effect was localized in chambers 1 to 6 inclusive.

At the foot of chamber No. 1 and inside of the loaded branch on road No. 797A a masonry wall had been built some distance in the heading. The space outside of this wall formed a convenient location for runners and drivers to eat their lunch. This point was also opposite the empty car branch, on which there were standing at the time of the explosion three empty cars. The force of the explosion traveled down No. 1 chamber taking with it all the doors and walls. The runners were evidently sitting down, while David Owens, from the west side of the slope, who had apparently just reached the scene at that instant, probably faced the explosion. The flying debris from the walls threw the boys to the opposite side of the road against the cars killing them instantly, with the exception of David Owens whose death occurred a short time after being removed to the foot of the slope.

The Inside Foreman and his assistants in the rescue work found the following persons killed: John Seranick, Patrick Gavin, (Runners); Bruno Lishinski, Mike Michalo, (Drivers); John Darutis, August Wolgast, (Doorboys); John Kabaliski and Daniel Souchak, (Laborers). David Owens died the same day. The following died the next day: Louis Shaka, Miner; John Beelask, Laborer; John Lacavitch and Thomas Broscynzyn, Miners.

The flame of the explosion traveled through the heading from chamber No. 3 into chamber No. 2, leaving a fire burning at the outside rib near the face. This was discovered immediately after the rescue of the men. Owing to the heat of the fire and the force of the explosion the face of chamber No. 2 was badly caved which proved to be quite a hindrance to the work of fighting the fire. Owing to the unusual height of the vein, which averaged about 18 feet, there is little doubt that the walls, doors, etc., were unable to offer enough resistance to confine the destruction to these immediate chambers. This was proved by the fact that a number of walls were badly bulged from the force of the explosion.

As a precaution and to prevent the accumulation of gas from being conducted over the fire, it was necessary to build walls and stoppings, 11 in number, so as to conduct the air up chamber No. 3 through the headings to chambers Nos. 4, 5 and 6 and then to road No. 814 and to the west side of the slope. Constant examination was being made to ascertain the condition of the workings east of the fire. It was then decided to drive a heading to the face of chamber No. 2 from the face of chamber No. 1. A heading 5 x 8 feet was driven a distance of 40 feet in ten hours time. A connection was made with the main fire line on the slope and conducted through the heading to the fire, which was the means of putting it out in a very short time. It was then decided to drive a heading from road No. 797A to the face of chamber No. 4 in order that the ventilation might be carried from the workings and not conducted to the vicinity of the fire. The driving of this heading proved to be an important factor in the complete restoration of the ventilation. Due to the hazardous conditions existing after the explosion, namely, fire, bad roof and gas accumulation, the officials in charge should be commended for having restored this section of the mine to its normal condition without any injury whatsoever to any of the employes.

The exact cause of this explosion will probably never be known. The subsequent examination made by Mine Inspectors S. J. Jennings, Joseph J. Walsh, D. T. Davis and myself on the 19th instant, of the face of chamber No. 3, revealed a slip in the vein pitching at an angle of 35 or 40 degrees and starting about 10 feet from the bottom and running up from the face of the top rock. The thickness of the vein at this point is about 18 to 20 feet. The rush of coal off the slip was probably due to either an accluded body of gas of sufficient force to cause the coal to rush, or to the fact that the miner had fired a hole on the west side of the chamber fracturing the top coal to the slip and causing it to rush; but in either event the force of the rush of coal was sufficient to force the gas to travel with the air a distance of about 175 feet to the miner's box where it was ignited from the miner's lamp. This theory is supported by the statement of John Lacavitch who was the miner in chamber No. 3 and who was found in the section between the main doors as he was walking out.

When questioned by the Mine Foreman he made the following statement: "Rush of coal and cave came in my place and the gas lit on my lamp at the box."

An inquest was held by Coroner Marley, March 11, 1915, and the following verdict given: "That on February 17, 1915, a body of gas was ignited which exploded, causing the death of John Lacavitch and 12 others. The evidence further shows that the place where the accident happened had been gaseous before this time and that the gas on this occasion arose from a slide. The evidence further shows that the miners working in and about this place with their laborers, had been allowed to use naked lamps. From all the evidence we find that the deceased and 12 others came to their death at the Prospect Mine of the Lehigh Valley Coal Company on February 17, 1915, from injuries resulting from a gas explosion, and from all the evidence we find the officials of the company neglectful in allowing naked lamps to be used in gaseous workings instead of demanding the use of safety lamps, and furthermore we recommend the use of the new electric safety lamps that recently passed a successful test by the Federal Bureau of Mines and were approved by the Pennsylvania Department of Mines for use in gaseous mines. We believe that in all workings, workmen should be provided with ample light, especially in veins where the coal is from 16 to 20 feet in height."

CAUSES AND LOCATION OF FATAL ACCIDENTS

The records for the year show that as usual the two principal causes of fatal accidents in the anthracite mines were (1) falls of coal, slate and roof, and (2) cars. The total number of inside fatal accidents was 527, of which 268 or 50.85 per cent. were caused by falls of coal, slate and roof, and 81 or 15.37 per cent. by cars. The other causes were explosions of gas, 33 or 6.26 per cent.; explosions of powder and dynamite, 8 or 1.52 per cent.; electricity, 4 or .76 per cent.; blasts, 69 or 13.09 per cent.; falling into shafts and slopes, suffocation by gas and miscellaneous causes, 64 or 12.15 per cent.

The accidents by falls of coal occurred as follows: at face of working places, 41; at pillar work, 18; on gangways while timbering and repairing, 2; in heading, 1; a total of 62, or 23.13 per cent. By falls of slate at face of workings, 27; at pillar work, 9; on gangways while timbering and repairing, 1; in old workings, 1; a total of 38, or 14.18 per cent. By falls of roof at face of workings, 122; at pillar work, 30; on gangways while timbering and repairing, 10; in old workings, 2; on slopes, 3; in heading, 1; a total of 168 or 62.69 per cent.

The total number of fatal accidents by falls of coal, slate and roof at face of working places was 190, or 70.89 per cent. of all accidents from falls; at pillar work, 57 or 21.27 per cent.; on gangways while timbering and repairing, 13 or 4.85 per cent.; in heading, 2 or .75 per cent.; in old workings, 3 or 1.12 per cent.; on slopes while timbering and repairing, 3 or 1.12 per cent.

Eighty-one persons were killed by cars, 50 of whom were killed on gangways, 12 on slopes, and 19 at other places.

Sixty-nine persons were killed by blasts, and eight were killed by explosions of powder and dynamite on gangways and at other places.