

the sparking of the trolley wheel against the trolley wire hangers. The explosion travelled out in the opposite direction to the travel of the motor trip. The motorman and triprider were burned but slightly; the motorman was merely singed. The trapper boy, Alexander Vansack, was located directly in the path of the explosion at the intersection of the 5th north panel and the first west south entry about 120 feet from the explosion origin. He was severely burned and died the same night. A road cleaner was working about 200 feet from the trapper boy and he was burned seriously, though probably not fatally.

The zone of explosion is very limited, extending to room No. 3 on the 5th north panel and about 250 feet outby from the intersection of the entries on the 1st west entry. All stoppings in the vicinity are of wood but none of these were damaged. The only damages done to the ventilation was the breaking of the top hinge of the door between the 1st and 2d west south entries at the 5th north.

The intersection of the 5th and 6th north panels and the 1st west entry is on a knoll; the panels dipping on a steep grade towards the faces and the first west south dipping outby from the intersection. The haulage roads throughout the vicinity are covered with motor sand and this was an important factor in localizing the explosion. Twenty men were at work in the 5th and 6th panels and it is fortunate that the explosion did not travel that way. Coal dust entered into the explosion but the presence of sand evidently retarded its propagation farther than 250 feet along the 1st west south entry. One reason that the explosion did not travel down the panels is due probably to the dip towards their faces.

The gas is produced by the squeezing of the upper strata of the 3d and 4th north panels and the 5th north panel rooms. Evidence of this squeezing has been seen for several months. Room No. 1 where the explosion originated, has been caved for some time. Extra examiners were employed to examine for gaseous conditions but it is doubtful that they examined the top of fall in room No. 1 on this day. It is evident that an accumulation of gas existed on the top of the fall. The gas was forced out by a fall of rock just as the motor was passing.

The 5th north panel squeeze is still producing gas and the 1st west section of the mine is not working.

(Signed) J. E. JONES,  
State Mine Inspector, Eleventh District.

#### EXPLOSION AT BELL & ZOLLER MINE.

*Hon. Evan D. John, Director, Department of Mines and Minerals, Springfield.*

SIR: The following is a short statement covering the explosions which occurred in the mine of the Bell Zoller Coal Company located at Zeigler, Illinois, December 5 and 6, 1917.

On the morning of the 5th, we were notified of a slight explosion having taken place at the above named mine. In company with Mr. John O'Rourke, County Mine Inspector for Franklin County, John E. Jones, Safety Inspector for the Old Ben Coal Corporation, and Mr. William B. Plank of the Federal Bureau of Mines, we arrived at Zeigler about 12:00 o'clock noon. We were informed that the mine manager and pit committee had gone to the edge of the old works on the 3d and 4th right off the 4th east south, and from statements made learned that some gas had been ignited.

We went into the mine, and along the main entry, when we were met by two men coming toward the bottom who had been badly burned by a second explosion, in the course of an investigation made by them at the place where the gas had been ignited the first time. We concluded that the gas had been ignited the second time either by the flame of a naked light, or a damaged safety lamp. From one of these explosions a fire had been started in the old works. We decided that the best thing to do was to build stoppings and seal off this pair of entries, and had the work well in hand, when the third explosion came about 4:00 o'clock p. m. The flame

came out into the entries where the seals were being built, and the heat was so intense that thirteen men were burned.

Of the number who were injured by these explosions, three died: William Azel, December 10; William Semansk, December 12, and W. F. Edwards, December 17.

After the third explosion all of the men who were in the mine went to the surface and a consultation was held. A decision was reached that we would let the mine stand until the next morning, and if no other explosion occurred, we would go down again and attempt to seal off the territory in which the fire was located.

The next morning about 7:40 a. m., the fourth explosion occurred.

After the fourth explosion, a consultation was held by those present and it was decided that the only thing that could be done was to seal the top of both shafts, which was accomplished in as short a period of time as possible, and in a manner that was entirely satisfactory.

Respectfully submitted,

FRANK ROSBOTTOM, *State Mine Inspector.*

#### FATAL ACCIDENTS.

July 5, 1917, Peter Slavin, assistant mine manager, age 40 years, married, was killed by runaway cars, which broke from trip, in the Bell & Zoller mine, Zeigler. He leaves a widow and four children.

July 6, 1917, Walter Owens, loader, age 23 years, married, was instantly killed by a fall of rock in Middle Fork mine of the United States Fuel Company, Benton. He leaves a widow and one child.

July 7, 1917, Charles Simpkins, machine runner, age 29 years, single, was killed by electric shock in Middle Fork mine of the United States Fuel Company, Benton.

July 26, 1917, Alexander Vansack, trapper, age 17 years, single, was killed by an explosion of gas in mine No. 18 of the By-Products Coke Corporation, West Frankfort.

July 30, 1917, Barney Prye, driver, age 26 years, single, was killed by trip of cars in mine No. 9 of the Old Ben Coal Corporation, West Frankfort.

July 31, 1917, A. D. Brown, laborer, age 19 years, single, was killed by being run over by a railroad car at mine No. 1 of the West Frankfort Coal Company, West Frankfort.

August 4, 1917, Frank Boltrus, timberman, age 26 years, single, was killed by timber falling from cage at South mine, Franklin Coal & Coke Company.

August 13, 1917, Milton Little, triprider, age 19 years, single, was killed by being crushed with motor trip in Orient mine of the C., W. & F. Coal Company, Orient.

September 4, 1917, Tony Ganthes, miner, age 44 years, single, was killed by electric shock from trolley wire in mine No. 18 of By-Products Coke Corporation, West Frankfort.

September 8, 1917, Charles Thomas, coupler, age 25 years, single, was killed. Attempting to jump on motor he fell and was crushed to death in the Hart-Williams mine of the C., W. & F. Coal Company. He leaves two children.

September 17, 1917, John Patkus, miner, age 34 years, single, was killed on man cage, when counter-balance left guides and struck cage, in the Orient mine of the C., W. & F. Coal Company.

September 17, 1917, Alfred Kurz, miner, age 22 years, single, was killed on man cage when counter-balance left the guides at Orient mine of the C., W. & F. Coal Company.

September 17, 1917, James Boyle, miner, age 30 years, single, was killed on man cage when counter-balance left the guides at Orient mine of C., W. & F. Coal Company.

September 17, 1917, Andy Palo, miner, age 30 years, married, was killed on man cage when counter-balance left the guides at Orient mine of C., W. & F. Coal Company. He leaves a widow and five children.