

**July 19, 1920; Renton No. 3 Mine, Renton, Pa.;
9 Killed**

(From Bureau of Mines report, by L. D. Tracy)

On Saturday, July 17, power was shut off for repairs to the line. The fan was put in operation about 6:30 Sunday evening, but trouble on the line caused it to be stopped again until 2 a. m. Monday. The foreman, 6 maintenance men, and 2 firebosses then went down. At 2:30 a. m. the foreman instructed the powerhouse to put on the power in the mine. At 3:20 a. m. there was a violent explosion, wrecking the mine workings and blowing the cages into the headframes. The men in the mine were killed, and much dangerous work was performed by rescue crews in finding and removing the bodies. The mine generated much more methane than was realized by the officials, because of the normally adequate ventilation, hence the foreman's violation of the mining law in permitting the men to enter before the firebosses' examinations were made. Dry fine dust was thick in the entries, and sprinkling was relied on to keep it damp. Ignition was evidently caused by an arc from a trolley locomotive moved into an entry not yet cleared of accumulated gas. This is probably the most violent explosion recorded in the State.

**August 21, 1920; No. 19 Mine, Degnan, Okla.;
10 Killed**

(From Bureau of Mines report, by J. J. Rutledge)

A local gas explosion in the 4th east entry occurred about 2 p. m., resulting in the death of 10 of the 120 men in the mine. Except for blowing out most of the stoppings between the entry and aircourse in the immediate area, the workings were undamaged. A strong gas feeder had been cut near the entry face. The fan had stopped only 10 minutes before the explosion due to the belt slipping off the pulley. Gas accumulated in the face and was ignited by a miner's open light. Ventilation was quickly reestablished and the bodies removed. The wetness of the entry and the small body of gas prevented spread of the explosion by coal dust.

**November 23, 1920; Parrish Mine, Parrish, Ala.;
12 Killed**

(From Bureau of Mines report, by J. J. Forbes)

An explosion at 8:45 a. m. brought death to 12 of the 145 men in the mine and slightly injured 8 others. The explosion was confined to one entry which had been "dangered off" because of standing gas. A miner crossed the dangerboard, and the gas was ignited by his open light. Gas accumulated because of inadequate ventilation. There was little violence, and dust was not raised and ignited.

**February 12, 1921; Moffatt Nos. 1 and 2 Mines,
Oak Hill, Colo.; 5 Killed**

(From Bureau of Mines report, by H. I. Smith)

The two mines are connected workings at different levels in the same dipping coal bed. At about 6:00 p. m. a coal-dust explosion from blown-out shots of black powder resulted in the death of 2 shot firers and 3 miners in the No. 2 mine. A pumpman in No. 1 mine escaped uninjured, but a shot firer was overcome and was rescued an hour later. The explosion was violent throughout No. 2 mine and in parts of No. 1.

**March 9, 1921; Rahn No. 11 Mine (Anthracite),
Seek, Pa.; 5 Killed**

(From State inspector's report, 1921)

A booster fan had been shut down overnight. The electricians moved the fan to a new location, and when

they threw in the switch accumulated gas was ignited. Five men were killed, 6 injured and 3 escaped uninjured.

**August 31, 1921; Harco Mine, Harrisburg, Ill.;
12 Killed**

(From Bureau of Mines report, by C. A. Herbert)

The 11th and 12th North entries had been driven toward a connection and stopped. About noon on August 31, a miner drilled through into the face of these entries and ignited gas in the hole with his open lamp. An explosion occurred in the idle entries but did not affect the men who drilled the hole. Smoke and gases were carried over men in 1st and 2d North entries, resulting in the death of 11 men. On September 2 an apparatus crew was exploring for fires during the investigation. Three of the men became distressed, two being able to reach fresh air. The other two carried the third man until exhausted. When found 30 minutes later he was dead. The spalling roof keeps the road dust inert so that dust did not enter the explosion.

**January 30, 1922; Layman Mine, Hulen, Ky.; 6
Killed**

(From Bureau of Mines report, by C. A. Herbert)

On that night, eight men had gone back into the mine to get coal ready and fix up their places for the next day. Two of the men put in 6 shots on the solid across the face of a 22-foot room. They were heavily loaded with black powder. The fuse was lit, and the men were on the way outside when caught by the explosion. Five of the holes broke effectively, but one blew out, causing a dust explosion that came out the mouth of the drift. A rescue party quickly brought out the 2 injured men and the 6 bodies. The mine was very dusty.

**February 2, 1922; Belle Ellen No. 2 Mine, Belle
Ellen, Ala.; 9 Killed**

(From Bureau of Mines report, by J. J. Forbes)

At 2:15 p. m. the day shift of 200 convict laborers was in the mine when an explosion at the face of the 1st left aircourse off 9th right killed 9 men and injured 2 others. The shift runner examining the face after a blast with an open light ignited an accumulation of gas; the explosion was spread locally by dry coal dust but was stopped by incombustible dust from rock brushing further down the heading.

**February 2, 1922; Gates No. 2 Mine, Gates, Pa.;
25 Killed**

(From Bureau of Mines report, by J. W. Paul and W. J. Fene)

About 12:45 a. m. the regular night force of 25 men was in the No. 2 main section, about 2 miles from the bottom of the 559-foot shaft, when a local explosion caused the death of all of them, 9 by burns and violence and 16 by afterdamp. The explosion was reported an hour later when a motorman took a trip to the affected area. The afterdamp and smoke passed directly to the airshaft from the split of the ventilating current in the section. Ventilation was restored and the bodies recovered by rescue crews. Apparatus crews were kept in reserve. Two small fires were found and extinguished. The 16 men who were killed by afterdamp had traveled into the return from the explosion instead of escaping into fresh air in the opposite direction (fig. 54). Three shots were fired in succession in a face in which gas was liberated (fig. 55). The mixture of gas, dust, and air was probably