

back end. There was an expert handling the cutter, which is no light work to manipulate, who was sent by the manufacturer to make the tests. The machine is run by compressed air conducted in iron pipes from the surface down the shaft and along the heading road and then taken up the chambers by hose. It appears to be the proper method of mining coal in small and hard seams as well as larger ones, as undermining the coal and then blasting it down is certainly the proper way of mining, as a great loss of coal takes place by blasting it out of the solid, especially when the holes are too heavily charged with powder which throws the coal into the gob where it is not obtainable and is lost, as it is mixed with the refuse of the chamber, causing a loss to the operator as well as the miner.

Mine Accidents.

During 1898, 85 persons were killed or fatally injured and 201 were more or less seriously injured in and about the mines of the Third anthracite district. Of the number killed, 19 lost their lives in four separate accidents, which caused the increase over last year. The four accidents referred to are the Hallstead shaft, whereby David Emanuel, fire boss, and Thomas Williams, miner, lost their lives by venturing too far under a general settling of the roof in the old abandoned workings of the Red Ash vein after being warned by the mine boss to take no unnecessary risk by entering the disturbed district where the crush was in progress.

On May 5 Stephen Jenkins, James Monohan and John Titus lost their lives in the above shaft while putting guides in the shaft. The accident was caused by a chain used as a sling to hold the tackle block which was used to lower the guides to the men in the shaft giving way, allowing the guide to fall down the shaft, knocking the platform from under the men, causing them to fall to the bottom of the shaft and instantly killing them.

The other two accidents, one at the Midvale slope on October 1, whereby five men lost their lives by suffocation caused by the timber in the intake airway taking fire. **The other accident occurred in the Exeter shaft on the morning of November 5,** when nine men who were descending the shaft to work were killed by three loaded mine cars being run into the shaft by a misplaced switch. The evidence taken at the coroner's inquest of those accidents I send with this report.*

The verdict of the coroner's jury in the case of the five men who lost their lives by having been suffocated in the Midvale colliery on October 1 by smoke from timber in mine taking fire was that the

*The evidence before the coroner's jury in this case is on file in the Bureau of Mines.

accident was unavoidable and no blame should be attached to the officials of the Lehigh Valley Coal Company.

In the case of the men who were killed at the Exeter shaft on November 5, 1898, by cars falling down the shaft on a cage in which they were, the coroner's jury rendered a verdict that the engineer, Price, and the brakeman, Anthony, were culpable, and they were taken before Judge Lynch, of Luzerne county, where they waived a hearing and were held to bail for their appearance at court.