

caught from the furnace at the bottom of the shaft used for ventilating the mine; it was subdued by covering the shaft over with plank and then with dirt to exclude the air; when opened a day or two after, the fire was found to be extinguished and the damage not very great.

*Improvements*—The Gartside or Branch mine has been partly retimbered, also the Knecht, Brookside and Troy mines, all belonging to the Consolidated Coal Company. While retimbering the latter mine, quite an accident happened. It was left over night temporarily supported and during the night there was an exceedingly heavy rainstorm, which washed the drift from behind the timbers, where there was an opening left below; as a result the timbering gave way and allowed the shaft to cave in, making a hole 36x42 around the top, taking in pithead frame and shaker engine house, which all went down the shaft. This happened the 18th of May, and the bottom was not reached again until 1st of July. The damage has been repaired; it probably amounted to five thousand dollars.

The Enterprise mine at Rentchler has been retimbered.

Revolving screens, bins and elevators have been erected at Walnut Valley mine, Belleville, and at the Kolb mine, Mascoutah; at the former mine the pithead frame has been repaired.

Fans eight feet in diameter have been erected at the following mines in St. Clair county: Massie Coal Company Number I, Belleville; Summit Coal Company, Birkner, and at the Dietrich mine, near Freeburg.

At the Marissa mine, belonging to the Consolidated Coal Company, a new boiler has been put in in place of the old one, which, being tested, was found unsafe.

*Blown Out Shots*—On December 18, 1895, a serious explosion occurred at Odin mine, the result of a blown out shot; six men were more or less seriously burned and one was overcome by the smoke.

About noon, Joshua Dallas, an old and experienced miner, fired two shots in number 8 room, in second south entry; the room was only partially widened out and only a few yards from the entry. The blasting from this mine is all done from the solid, and this is rather poor coal for blasting, there being no parting from the roof and a poor one from the bottom; heavy charges of powder are necessary under the circumstances, and all the way from two to five quarts are used at a charge. The first of the two shots mentioned was a gripping shot on the left side of the room and had but a poor opportunity to do its work as it was gripping too much; it blew a little off the front of the shot and pounded that to slack and part of the hole was left standing. The second shot was on the right side of the room and pointing backward towards the first shot; it was bored only about 3½ feet and had practically no chance at all to do any work; it seems to have been heavily charged, leaving little room for the tamping. When this shot was fired, it simply blew the tamping and the force of explosion followed out both entries of Numbers 1 and 2 and burned men on both entries, some of them 500 feet from where the shot was fired. The ventilation of this mine is excellent and the current was blowing almost directly into the mouth of room number 8, from a cross-cut between number 1 and 2 entries. The room being damp, formed a moisture, so there

was no dust present except that manufactured by the first shot, which undoubtedly was the case.

I suggested to the company that no firing be done except by a man or men selected by the company and only at night, when no person but the shot-firers would be in the mine when the shooting was being done, and as they could select a place of safety from the direction that an explosion (if any should occur) would follow, comparative safety would be assured. The suggestion has been followed with good results, as several minor explosions of this kind have occurred since, and the shot-firers, by intelligently selecting a safe retreat from the probable direction of the explosion, have escaped harm.

I believe there is only one way to prevent this kind of accident, and that is to undermine the coal before blasting it, then less powder can be used at a charge. The danger arises from the quantity of powder used in charging. When a hole charged with about a half a keg of powder blows the tamping, the force and heat generated by the exploding of so much powder can easily be imagined.

*Payment for Mining*—It is impossible under existing circumstances to ascertain a correct average price paid for hand mining in this district, as by far the larger portion of it is paid for by the "box." In the first place, the size of the box varies at different mines, some are loaded with a close shovel taking slack and coal together, and some with a fork which leaves the coal comparatively clean; a great many use the rake and pan, but in no case are the miners paid by strict measure; the quantity of coal on top of the car varies with the ability and disposition of the boss to obtain results.

The men in this district are strongly opposed to the box system and desire to be paid by weight, because it is just.

*Fatal Accidents*—Thomas Jones, aged 52 years, married, miner, at Superior Coal Company mine, was instantly killed by a fall of rock. The accident happened between 5 and 6 p. m., when the shooting is being done before quitting work. There was a fault or slip in the roof running diagonally across the face of his entry. He had three shots to fire; one, or perhaps two of them had already been fired and he returned in the smoke to fire another, when the rock fell on him, crushing him above the hips and fracturing his skull at the back, which probably caused his death, and which was no doubt hastened by the dense powder smoke in which he was imprisoned for some time. The accident was the probable result of the deceased unwittingly violating the law prohibiting the firing of a second shot where the roof is broken or faulty, until the smoke of the previous shot has cleared away and the roof been examined. Mr. Jones was a Welchman by birth, and left a widow and two dependent children.

April 2, 1896, at the Rentchler mine of the Missouri & Illinois Coal Company, Edward Bunningham, a loader, was fatally injured by a fall of rock and died three days later. He was loading a car at the time the stone fell on him. The mine boss claimed to have ordered him to place more props under the stone, which was known to be loose; this he neglected to do. He was a single man, a native of America and 35 years of age.

April 11, 1895, at the St. Clair mine of the Missouri & Illinois Coal Company, Adolph Schwab, single, aged 19 years, a native born, was killed by a