

The Rixon Coal Co. of Chicago, is sinking a new shaft one mile east of Braceville, in Will county.

The Joliet-Wilmington Coal Co. is sinking a new shaft near Braidwood, Will county.

The Johnson Coöperative Coal Co. is sinking a new shaft two miles west of Fairbury on the Toledo, Peoria & Western railroad, in Livingston county.

The Diamond Coöperative Coal Co., Pontiac, Livingston county, is sinking a new shaft a quarter of a mile west of the city, on the Illinois Central railroad.

The Manhattan Coal Co. of Chicago, is sinking a new shaft one mile west of Cornell, Livingston county.

The Star Coal Co. is sinking a new air shaft at the face of the workings at its No. 2 mine, Kangley, LaSalle county.

The Cardiff Coal Co., Cardiff, Livingston county, has opened out a new mine about a half a mile west of the one destroyed by an explosion of gas as reported elsewhere. The hoisting and escapement shafts are each 8½ by 17½ feet in the clear; both contain three compartments; two of the compartments of the escape shaft are for air, and the other for the escapement of men by a cage in the shaft in place of a stairway. The third compartment in the main shaft contains stairways as an additional means of escape. The depth of the hoisting shaft from the surface is 224 feet. The hoisting engines were built by Crawford and McCrimmon; they are first motion, each cylinder is 24x36 inches, with a 6-foot drum. There are four boilers, two are water tube 175 horse power each; the other two are tubular, 150 horse power each. Both the main and escape shaft engines are set in brick buildings, all other buildings of the plant are covered with galvanized corrugated iron, making them as near fire proof as possible. The tower will be 70 feet high, built of structural steel. The Humble detaching hook will be used on the cages and in addition thereto, there will be a device for preventing overwinding, attached to the hoisting engine. The general design for the tower and dump structure were made by George S. Rice, general superintendent of the company, and is being built by the Wisconsin Bridge Co. The fan is 7x14 feet, high speed, with steel plate blades, and casing, no wood whatever being used in its construction. The shaking screens are double throughout. An Ottumwa box-carloader will be placed for the outer dump track. The cages will be double decked, steel rail guides will be used in the main shaft. Everything in the construction of this plant is for the handling of a large output.

FOUR EXPLOSIONS OF GAS AT THE MINE OF THE CARDIFF COAL CO., CARDIFF, LIVINGSTON COUNTY.

The first explosion in the Cardiff mine, which occurred March 13, 1903, whereby three persons lost their lives, was caused by gas igniting at a gob fire in the old workings down the south slope, which had been abandoned

over a year ago. This mine is situated on the Indiana, Illinois and Iowa, and the Wabash railroads, in the northeast corner of Livingston county, and is owned and operated by the Cardiff Coal company. The shaft is 240 feet deep to a 12 foot seam of coal; six feet lower there is a 3 foot seam. When the upper seam was worked out at this point, the south slope was commenced in the lower seam, and the rooms were driven at right angles to the rooms in the upper seam at the location of the gob fire in the lower seam. The strata between the two seams caved through, thus forming a chimney or draft for the fire. I received a message from Cardiff the morning of the day of the explosion to come at once, but owing to the time of trains leaving Streator, I did not arrive there until about 5 o'clock in the afternoon. Everything was right on top, the fan was running at the regular speed.

George S. Rice, general superintendent, and Benjamin Phillips, mine examiner, went with me down the shaft. We examined very carefully the section of the mine where the explosion occurred, but could not find any indication of fire damp. We therefore came to the conclusion that men could safely go down and repair the stoppings that had been destroyed by the force of the explosion, and thus restore ventilation in the mine.

There were 15 men in the mine when the explosion occurred, all at work building and repairing stoppings in the upper seam, intending thereby to smother the gob fire burning in the lower seam. Two of the men were working on the third southeast entry, two on the third northeast entry, two at the mouth of the south slope, and two at each of the rooms, one, two and three west of the south slope; two men were bailing water in the seventh and eighth southeast entry.

The two men working at the third southeast entry, James Hewitt and John McClusky, were instantly killed by being thrown against the entry rib by the force of the explosion. The two men at the third northeast entry were not injured; the men working at the south slope and in rooms one, two and three, together with the night boss, were all knocked down by the force of the explosion, but none of them injured, excepting the night boss, H. M. Dodge, whose shoulders were bruised. Two of the men working on the south slope went east, the other men went west, and reached the hoisting shaft, here they met the two men from the third northeast. There were four other men missing. All the men at the hoisting shaft went in search of the two men, who were working at the south slope. They were found laying about 50 feet east of the south slope, having been overcome by the after damp. James Barra, miner, was dead, and the miner with him was unconscious, but was soon revived after being taken to the fresh air.

By this time the night engineer had given a general alarm; Thomas Roberts, mine manager, soon had a rescuing party at the mine. The party descended the escapement shaft, (there had been a cage connected with this shaft;) they found ten men near the hoisting shaft and near the mule stable. It may be well to state here that at this time a part of the hoisting engine was broken, and had not been repaired. After the explosion the men were taken out of the mine, while others of the rescuing party made further search for the miss-