

first motion for hoisting, and a 12-foot fan at the escapement shaft for ventilating purposes. The company will work on an average 100 miners during the year. This company has opened offices for the sale of their coal in Chicago. The Girard coal has become quite a favorite in Chicago. A brick and drain tile works is connected with the mine. Shale is mined in a shale seam above the coal. And it is intended to put down a slope to the coal seam, and hoist the shale from the landing of the coal seam. The shale is crushed and used in the making of brick and drain tile. The firm consists of A. K. Young, C. C. Armstrong, Henry Wood.

L. C. Murphy, Secretary, H. Wood, General Manager.

VIRDEN COAL SHAFT.

Viriden Coal Shaft, J. W. Utt, proprietor, is located in the village of Viriden, on the lines of the Chicago, Alton and St. Louis Railroad, and the Jacksonville and South Eastern Railroad. The shaft is 320 feet deep, the coal averaging $7\frac{1}{2}$ feet in thickness. There is an average of ninety miners employed during the year. A new fan, 10 feet in diameter, has been put in on the air chamber at the hoisting shaft during the year. There is a brick and drain-tile manufactory connected with the mine. A seam of shale is worked and hoisted out of the escapement shaft. The shale is used for making paving-brick and drain-tile. This mine has been greatly troubled with gob-fires, and the east side of the shaft had to be stopped owing to the fire cutting off the return air-course. The manager is now opening up the west side, driving double entries, which will give better ventilation and not so much danger from fire. The coal is hoisted by double engines on the first motion, which are 12x20. Two boilers are used for getting up steam, each 42"x20'.

J. W. Utt, Manager. Owen Garrett, Underground Manager.

MEDORA COAL AND MINING Co.

This shaft is located in the village of Medora, and at the intersection of the Chicago, Burlington and Quincy, and Wabash, St. Louis and Pacific railroads. The shaft is 280 feet deep, the coal being 2 feet 10 inches thick. The mine is worked by long wall, and ventilated by a steam jet. This mine has been greatly troubled with carburetted hydrogen gas (fire-damp). The west side of the workings had a rise of 1 in 10, and at about 400 feet run up to a rise fault, and not having a separate air chamber, the mine could not be properly ventilated. The gas working out of the coal always lay at the face on the rise side of the workings, and the works had to be examined every morning by safety lamp. This company commenced to sink an escapement shaft; put it down 10 feet and stopped, and the mine is at present stopped, owing to some trouble with the stockholders. The coal is hoisted by double engines, 12x24, first motion. The foundations of the engines are elevated to the height of the top landing. The company bored below the present coal for a larger seam, but they went through the coal measures and found none.

CHESTERFIELD COAL AND MINING Co.

This shaft is located adjoining the town of Chesterfield, and on the line of the Wabash, St. Louis and Pacific Railroad. The shaft is 240 feet deep; the coal 2 feet 10 inches in thickness. The mine is worked by long wall. The company employs an average of 30 miners during the year. The coal is hoisted by double engines, 14x30, on first motion; one boiler 48"x30'. There is no escapement shaft at this mine. Notice has been served on the company, and they will commence to sink this fall, and continue until the shaft is finished. This mine has been very successfully worked by long wall, considering the difficulties connected with it.

Manager, James Small.

ABBEEY MINE No. 3. MADISON Co.

This shaft is operated by the Abbey Coal and Mining Company, and is located on the St. Louis, Vandalia and Terre Haute Railroad, adjoining the corporate limits of the city of Collinsville. The shaft is 146 feet deep. The seam of coal has an average of $6\frac{1}{2}$ feet. The mining is all done by machinery, an average of seven Harrison machines, worked by compressed air, being in use during the year. A Norwalk compressor is used, with 20-inch cylinder and 24-inch steam cylinder. The reservoir is 20 feet long by 32 inches in diameter. The air is conducted to the face of the workings by cast iron pipes. Small reservoirs are used in the mine for taking the condensation out of the pipes. The seam of coal is well suited for machine mining, having a limestone top in about one-half of the workings. The machine men, loaders, blasters and timber men are all paid by the day. The working is all done by single-entry. This company has put in during the year a 50-ton track scale, and erected a 10x3 $\frac{1}{2}$ foot ventilating fan at the top of the escapement shaft. They are at present putting in a new hoisting engine.

The President of the Abbey Coal Co. is W. J. Crandall; General Manager, W. E. Crandall; Mine Manager, Wm. Fletcher; Underground Manager of No. 3 is Peter Greaves; Mechanical Engineer, John Killinger.

COLLINSVILLE COAL AND MINING COMPANY,

Is located on the St. Louis, Vandalia and Terre Haute Railroad, adjoining the city of Collinsville. The shaft is 150 feet deep. The average thickness of the seam of coal is $6\frac{1}{2}$ feet. They employ on an average 70 miners during the year. The mine is worked on the single-entry plan. This company originally worked two shafts. The machinery has been removed from one, which is now used as an escapement shaft. The mine is ventilated by a furnace, six feet in width of grate bar; the entries are driven 10 feet wide. The furnace will give 20,000 cubic feet of air. The mine being worked on the single-entry plan, it is almost impossible to carry the air up to the working face. There are no scales at this mine. Suit was commenced against the company for not having scales, but the company carried the case to the Appellate Court, and as yet there has been no decision.

The Manager for the Collinsville Coal Company is Joseph Wickliffe; Underground Manager, Martin Fulton.