

ABANDONED MINES.

Six mines heretofore reported as local mines have been abandoned.

NEW MINES.

The second shaft in the district to be completed under the new law, requiring them to be constructed of fireproof material, was sunk by the United Coal Mining Company at Buckner, Franklin County, and is known as its No. 2 mine.

The work of sinking the shaft for this mine was begun Oct. 25, 1910. This work was made unusually difficult by the reason of the fact that at about 35 feet from the surface something like 12 feet to 15 feet of quick sand was encountered which necessitated the use of interlocking steel channel bars. Coal was reached May 28, 1911.

The depth of the main shaft is 447 feet, and is 11 feet by 19 feet in dimension. It is curbed in the usual way with 3-inch yellow pine timbers, but a solid concrete wall was used for 35 feet down from the surface and 35 feet from the bottom. Steel buntons were used in both shafts and the sides were lined between the concrete with galvanized iron.

The escapement shaft is built in the same way and is equipped with a man and material hoist, the cage being 4 feet 6 inches by 4 feet 2 inches. The air chambers are 10 feet 6 inches by 11 feet. The steps are made of steel.

Air is furnished to the mine by means of a Capelle fan, 13 feet 6 inches in diameter by 6 feet, with a capacity of 400,000 cubic feet per minute, against 3-inch water gauge.

The mine is equipped with electric haulage and will eventually use fifteen haulage motors, including gathering motors, and about twenty-five chain breast undercutting machines of Goodman Manufacturing Company's make.

The bottom is equipped with Phillips' automatic cager, and electricity will be used for pumping and lighting the mine. The overcasts are built of concrete and steel "I" beams and all stoppages are to be made permanent.

The anticipated output is 4,000 tons per day. The mine will be developed on the panel system and will use mine cars of 4-ton capacity, running on 50 pound iron in the main entry, 40 pound in the cross entries and 30 pound in the rooms.

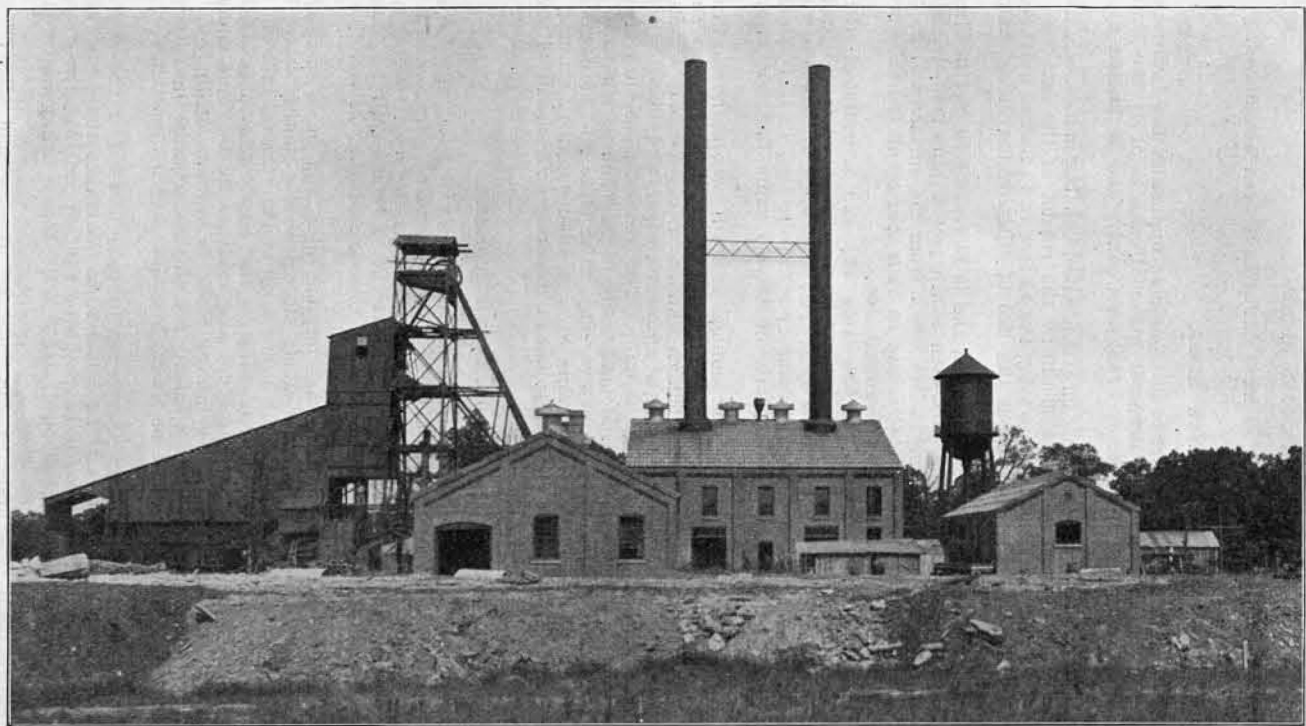
LOCATION, RAILROAD CONNECTION, ETC.

This mine is located about two miles east and south of No. 1 mine, which is a mile east of Christopher. This location was selected; first, because it placed the mine in the center of the field which is to be developed; and, second, because such location made it convenient to secure railroad connection with both the Illinois Central and the Chicago, Burlington and Quincy railroads.

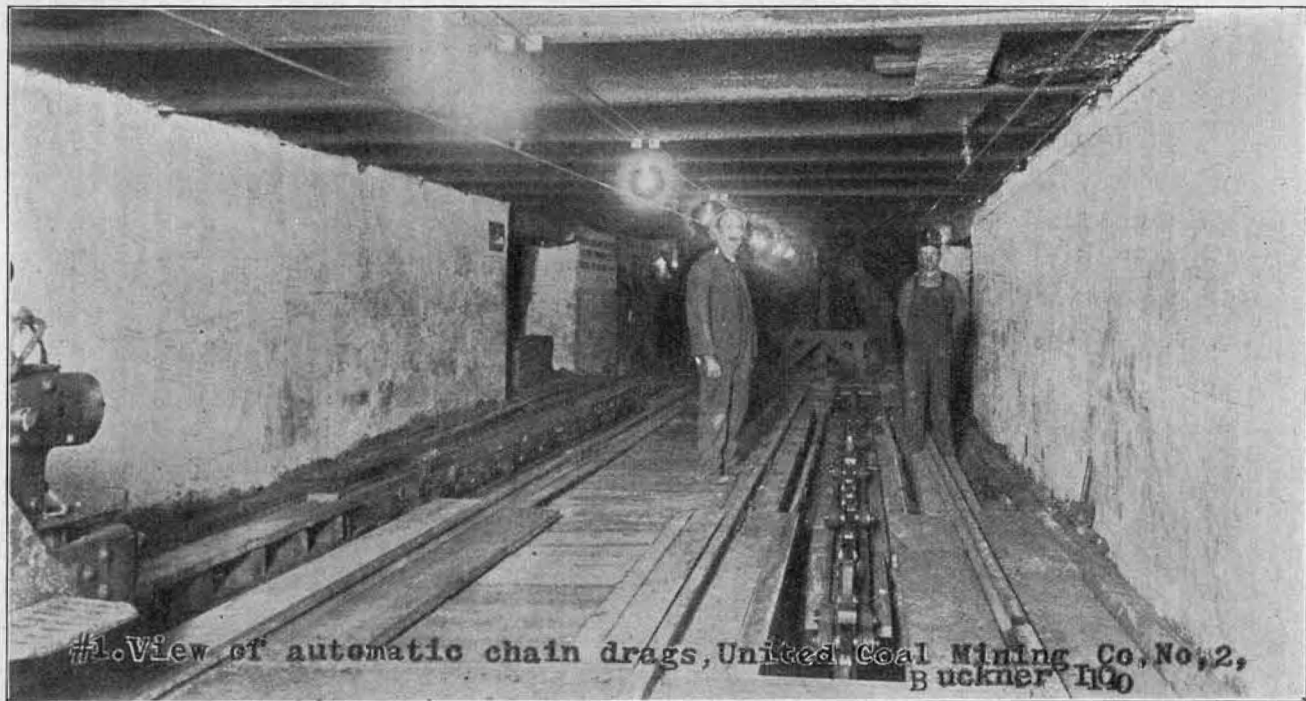
The tracks forming the working yard for this mine, run in an eastwardly and westwardly direction, with the empty storage tracts on the west. The connection from the Illinois Central is made by a spur coming in from the north which forms into a "Y" connecting to the empty and loaded yards. The C., B. & Q. comes in from the south and connects in the same manner, thus forming a double "Y." The mining plant is located within this "Y" and therefore has a unique arrangement, not only as regards the receiving of empties and the taking out of loads, but also for the receiving of all mine supplies, etc.

Empty cars from the storage tracks are brought down over the railroad track scale and weighed before being delivered to the tracks under the tippie. After being loaded, they are passed out over another railroad track scale, and all loads are thus weighed on a single scale before being delivered to the storage yard.

The entire plant was designed and built by Roberts and Schaefer Co., McCormick bldg., Chicago, Ill. Each unit of the plant forming to complete the works; both the main shaft and the air shaft and the entire under-



United Coal Mining Co.'s No. 2 Mine, Buckner, Franklin County.



ground arrangement, was very carefully planned, not only to meet the large capacity above named, but to enable this amount of coal to be hoisted, screened and marketed in the best possible condition and at the least expense.

The top works consist of a four-track steel tippie, complete with all the weighing, screening and loading equipment; a combined power plant including hoisting engines, electrical equipment and boiler plant; boiler house, coal conveyor, including overhead steel storage tanks and steel spouts for delivering coal to automatic stokers; ash handling equipment, including ash tunnel under the boilers, steel ash car and hoist for delivering ashes into hopper located outside of building; a complete repair shop including blacksmith, machine and car repair departments; a supply house containing store room, oil room and bookkeeper's office; an auxiliary hoisting plant in a separate compartment of the air shaft for hoisting men and materials during working hours; a ventilating plant consisting of a medium speed steel plate, steel housed fan, direct connected to a four-valve engine all housed in concrete; a double fireproof and weather proof power house; a complete water system consisting of reservoir, electric driven pump, cast iron water lines, elevated steel tank and distributing system; complete electric lighting system and a small office for mine superintendent and clerk located near railroad scale.

This entire plant, excepting the office, is of concrete, steel and brick construction, and therefore, is absolutely fireproof, and is as near permanent as the present art permits.

The accompanying illustrations show some of the principal parts of the plant, but as the machinery equipment used in this plant is of a much higher grade than it has been customary to install in mining plants, a brief description of this equipment will doubtless be of interest.

TIPPLE EQUIPMENT.

The tippie is provided with the standard weight hopper arrangement for weighing mine-run coal, but this coal, instead of being dumped on to shaker screens in pit car quantities, which in this case amounts to four tons, is dumped into a receiving hopper from which the coal is fed regularly onto the screens by a reciprocating feeder. The shaker screens are of a new type which enable mine-run coal to be made on the lump track without the use of cover plates. The screens are of the roller type and are 10 feet wide, the upper screen having a double deck for making both slack and nut coal, and the lower screen a single deck for taking the egg out of the lump coal. A small hopper is placed beneath the screens over each track to receive a small amount of coal which enables cars to be changed beneath the tippie without interruption of hoisting and dumping coal. This hopper over the egg and nut tracks contains lip screens for the rescreening of coal before being loaded out. The slack taken out of the egg and lump coal is carried back by a small conveyor to the slack car. The coal on the track is delivered into the cars by the use of end loading chutes which can be raised and lowered so as to deliver the coal into the cars with the least breakage possible.

POWER PLANT MACHINERY.

The hoisting engines are a pair of 28 by 48 feet direct connected to a pair of 8 feet diameter drums. These engines have steam brake, steam reverse and all other modern appliances for safety and convenience in operating.

The present electrical equipment consists of one, 250 K. W. generator direct connected to a 375 horse power, four valve engine and small lighting unit for use when the large machine is not running.

The six panel switchboard contains a full complement of Wattmeters, ammeters, volt meters, circuit breakers, rheostats for field, control for the generators and a complete set of switches to care for the various circuits, such as underground, tippie, fan, lighting, etc. The board also carries on one independent panel, a set of steam recording instruments.

The boiler plant consists of four 335 horse power water tube boilers set up in batteries of two, with separate steel stack for each battery. These boilers are finished with "Model" automatic stokers by which it is fired automatically from the steel bunkers overhead.

The usual feed water heaters, feed water pumps, etc., were also installed, the latter being in duplicate, cross connected to enable either pump to supply the boilers while the other pump is being repaired.

The water supply is measured by a meter which, with the other equipment above mentioned, permitted complete boiler tests being made; and, this company stands ready at all times to make such tests to show its customers the excellent steaming qualities of this coal.

AUXILIARY HOISTING PLANT.

This consists of a small pair of direct connected hoisting engines operating a platform cage working in a separate compartment of the air shaft. The object of installing this separate hoist was to avoid any interruption in hoisting at the main shaft during working hours. When it is necessary, during such hours, to raise or lower men or materials, it will be done with this auxiliary hoist.

VENTILATING PLANT.

The air is furnished by a direct blowing, reversible, double inlet, medium speed, steel plate fan which is direct connected to a high grade, four-valve engine. The fan and housing for same, including connection to air shaft, are entirely of steel. The housing for the side drifts and the engine room is all of reinforced concrete. The entire construction is therefore both permanent and fireproof.

WATER SUPPLY.

A word regarding the water supply for this mine may be of interest, as the pump at the reservoir is electrically driven and electrically controlled by a float switch in the water tank near the boiler plant. The connection from this pump to the tank is a 6-inch cast iron line, and the steel tank holds 30,000 gallons and is supported on a steel structure. This unit of the plant is therefore in keeping with the high grade equipment used throughout.

In addition to the above, three mines of the local class are listed in this report as new mines.

CHANGE IN NAME.

The Brazil Block Coal Company's mines No. 11 and No. 18, have passed into the hands of W. C. Niblack, receiver of the Dering Coal Co.

The Wilmington Star Mining Co.'s No. 8 has changed to Ohio Valley Mining Company No. 8.

The Harrisburg Big Muddy Coal Company No. 12 and No. 14, also Harrisburg, Saline County Coal Co., No. 15, have changed to O'Gara Coal Co., Nos. 12, 14 and 15.

The Galatia Coal Company has changed to St. Louis Coal and Coke Company.

MINE FIRE.

As a result of a fire of mysterious origin, the W. P. Rend Colliers Company's recleaning plant was destroyed June 18, 1911. The structure was a short distance from the main shaft, and contained about 200 tons of coal. The box car loader was also in danger of being destroyed when the fire was noticed, but by being stationed on wheels to fit the railroad track it was speedily removed.