

SEVENTH INSPECTION DISTRICT—1912.

ANNUAL REPORT.

Counties—Calhoun, Greene, Jersey, Macoupin, Montgomery.

W. W. WILLIAMS, *Inspector*, Litchfield.*Hon. Martin Bolt, Chief Clerk, State Mining Board, Springfield:*

SIR—Complying with section 5 of the general mining law of Illinois, I submit herewith the annual report of the coal producing counties of Calhoun, Greene, Jersey, Macoupin and Montgomery.

SUMMARY OF THE ITEMS SHOWN IN THE REPORT.

Number of counties producing coal.....	5
Number of shipping mines.....	23
Number of local mines.....	7
Number of new or reopened mines.....	..
Number of closed or abandoned mines.....	..
Number of miners.....	..
Other underground, men.....	2,040
Boys underground.....	4,599
Boys above ground.....	149
Others above ground.....	6
Total number of employees.....	583
Total tons of coal produced.....	7,377
Days of active operation, all mines.....	7,201,251
Kegs of powder used for blasting coal.....	148
Tons of coal shipped.....	91,740
Tons supplied to locomotives.....	6,759,975
Tons sold to local trade.....	58,688
Tons consumed and wasted at the mines.....	119,873
Number of fatal accidents.....	262,715
Number of non-fatal accidents.....	23
Number of employees to each fatal accident.....	84
Number of employees to each non-fatal accident.....	321
Tons of coal produced to each fatal accident.....	88
Tons of coal produced to each non-fatal accident.....	313,098
Ratio of fatal accidents per 1,000 employees.....	85,729
	3.12

The output in tons for the years ended June 30, 1911 and 1912, with the increase or decrease is shown by counties in the following table:

Counties.	Total output—tons.		Increase.	Decrease.
	1911.	1912.		
Calhoun.....	1,775	1,660		115
Greene.....	6,428	5,400		1,028
Jersey.....	578	800	222	
Macoupin.....	4,279,386	4,913,050	633,664	
Montgomery.....	2,189,078	2,280,341	91,263	
Total.....	6,477,245	7,201,251	725,149	1,143
Net increase.....			724,006	

NEW AND ABANDONED MINES.

No new mines are reported in operation this year and none abandoned.

CHANGE OF NAMES.

The Burnwell Coal Company, the Kortkamp Coal Company, and the Montgomery County Coal Company, will hereafter be operated under the name of Peabody Coal Company Nos. 11, 12, 14, and 15, respectively.

IMPROVEMENTS.

Considerable improvements have been made in mine No. 5 of the Madison Coal Corporation, Mt. Olive, such as cleaning air courses, covering trolley wires, etc. A concrete oil house to keep the day's supply of oil in, also a concrete machine and motor repair shop in which to do the repairing of machines and motors, have been built in the mine.

The company has purchased three sets of Fleuss mine rescue apparatus with all necessary appliances, such as pump, oxygen tanks, etc.; also has a set of first aid charts; has material on hand now to build a rescue station which will be erected soon; has built a new brick blacksmith and machine shop and equipped it with machinery; has purchased one new lathe, making two lathes in use; also a new lathe for turning motor wheels.

The supply house has been rebuilt and the company is now nicely fixed to take care of the supplies. The buildings have all been painted and yards cleaned and graded and everything put in first-class shape for the winter.

The Consolidated Coal Company of St. Louis, in mine No. 14, reduced the electric voltage from 500 to 275 volts to comply with the law.

Two general electric 10-ton locomotives and one Sullivan type undercutting machine have been installed. The machine has a 6 feet 6 inches cutter bar and makes a continuous cut under the coal 6 feet 6 inches deep by 1 foot 6 inches across the working face in one minute, so that a room 30 feet wide is cut 6 feet 6 inches deep in twenty minutes without resetting the jacks or removing props, thus leaving the timber supports to the roof as they were originally placed by the miner. No manual labor is required in loading or unloading, or while the cut is being made. The machine performs all operations under its own power. It is provided with a self-propelling truck, thus enabling the operator to transport the machine from one working place to another without the aid of mule power, as is the case with other types of mining machines.

Two new Westinghouse electric generators are being installed, one of 800 kilowatts, eleven hundred horse power, and one of 150 kilowatts, two hundred horse power. The 800 K. W. generator generates the power to operate the mine locomotives and mining machines, while the 150 K. W. generator will furnish the power to operate the mine fans, pumps, and furnish light. The generators will be driven by steam turbines running condensers; a cooling tower 25 feet by 25 feet and 75 feet high, will be built to cool the water for the condensers. Steam will be supplied by twelve 72 inch by 18 feet horizontal tubular boilers, connected to a concrete chimney, 175 feet high, 8 feet inside diameter at the top. The capacity of the stack is 2,000 H. P. The twelve boilers are connected to the large chimney by flues built of ¼-inch American ingot iron. The furnaces under the boilers are equipped with automatic stokers, obviating hand firing. The coal used under the boilers will be conveyed from the coal washer by steel flight conveyors to large coal bins located overhead in the boiler house, so that the coal gravitates to the stokers, requiring no manual labor in the boiler house, except one man, whose duty will be to attend to the feed pumps, to keep the water in the boilers at its proper level. The ashes from the furnaces are conveyed out of the boiler house by steel flight conveyors to railroad cars provided for that purpose.

The No. 7 mine of this company, located at Staunton, Macoupin County, was closed down in August, 1909, on account of the antiquated equipment,

and the small shaft openings could not be operated successfully. This mine is now under way of being reopened. The hoisting shaft and air shaft are being enlarged, and when completed will be 8 feet 10 inches by 15 feet 6 inches. The mine track gauge will be widened from 22 inches to 42 inches. Three ton cars will be used in which the coal is transported from the working faces to the surface. The head works, hoisting tower and screen houses will be of steel construction and fireproof. The coal will be hoisted by one pair 24 inches by 36 inches Danville engines connected direct to an 8-foot diameter steel grooved drum. The electric power to operate the three 10-ton mine locomotives, twelve Sullivan continuous undercutting machines, mine fans and pumps, will be transmitted from No. 14 mine under pressure of 2,200 volts alternating current to the motor generator sets, where it is reduced from 2,200 volts A. C. to 275 volts D. C. The mine when completed, about Jan. 1, 1913, will have a capacity of 3,000 tons and give employment to five hundred men. In connection with this mine a coal washing plant of 1,200 tons capacity per eight hours is being built of the latest improved machinery for washing coal. The new washer will be built of steel and made fireproof.

In the No. 8 mine, Mt. Olive, the electric voltage was reduced from 500 volts to 275 volts. On account of the increasing demand for washed coal, 50 per cent of the coal hoisted from this mine is crushed at pit head, conveyed by steel flight conveyors to railroad cars and shipped to washing plants at Staunton and Mt. Olive, unloaded from the cars by unloading machinery and conveyed into the washery, where it is washed and again loaded in cars and shipped to market. At this mine two large coal bins, each 175 tons capacity, are located to supply engine coal for the Wabash engines. The coal used on the locomotives is also crushed to sizes from 6 inches down and conveyed by steel flight conveyors to the several bins. The ventilation for No. 8 mine is supplied by one 20-foot diameter fan, driven by electric motor, located at the old No. 10 mine, more than one mile away. The fan is incased in concrete walls, making every part fireproof, no wood or other inflammable material being used in the building. The power for driving the fan is generated at No. 8 mine and transmitted by overhead wires to the fan motor. At the bottom of the air shaft is located a triplex pump, electric driven, which starts as the water rises in the sump and when the water in the sump is exhausted, the pump will stop, being automatically cut out by an ingenious device operated by floaters.

In mine No. 15, Mt. Olive, the electric voltage was reduced from 500 volts to 275 volts to comply with the State law. Two 10-ton electric locomotives have been installed at the mine to haul the coal from the workings to the shaft bottom. The cage landing at the shaft bottom has been lowered and the tracks graded, so that the loaded mine cars run by gravity to the cages. For empty car hauling, electrically driven machinery was installed, which hauls the empty cars up an incline of 5 feet 6 inches, when the empty cars again run by gravity to a point where the locomotives couple on and take them back in the works. Twelve cars per minute can be handled in this way.

The company has erected a new ventilator over the No. 10 mine at Mt. Olive to replace the one now over the No. 9 shaft.

The Burnwell Coal Company has installed electric motors in No. 2 mine at Witt.

The Shoal Creek Coal Company has built a new coal washer at the mine at Panama, to replace the one destroyed by fire on April 11, 1911.

The Peabody Coal Company suspended operations at No. 10 mine, Nokomis, for the purpose of erecting new top works, such as head frame, machinery, buildings, etc. This mine was sunk about six years ago, but so far has not been equipped as was originally contemplated.

The Superior Coal Company, Gillespie, has installed, at each of the three mines, a steel conical drum which very much facilitates the hoisting efficiency of the engines, lever throttles in place of the disc throttles, which are much easier to handle. The boiler plants have been improved by the installation of feed water heaters, automatic flue blowers, new pump lines, blow-off lines, etc. On the main steam header lines, condensing separators

have been installed with water traps attached which give a much better quality of steam. The improvements as now completed have added about 30 per cent to the efficiency of the plants. On the bottom of each mine, automatic block machines, or carstops, have been installed, increasing the facility for caging very materially. This is attested to by the phenomenal records made during the year at these mines. All previous records of these mines have been broken as well as the hoisting record of the State of Illinois. On Dec. 22, 1911, 4,468 13/20 tons were hoisted in eight hours.

In order to install this machinery at mine No. 1, it was necessary, on account of the grade, to sink the shaft two feet deeper and grade the bottom out on a profile made by the engineer, which included the rebuilding and regrading of all tracks adjacent to the bottom. This increase of the shaft required mechanical means for handling the empties at the bottom; they were therefore elevated by a traveling chain to a point where they would run by gravity, some three hundred feet away from the shaft, where the motors could get to them without going near the shaft. Gathering motors have also been installed at these mines.

In regard to measures of safety, first aid, mine rescue and inspection service, this company has made some material progress. The position of mine inspector, whose duty it is to go through the mine and observe any violations of the law by the company, or miners, and keep the main office informed at all times as to the condition of ventilation, fire-fighting equipment, traveling ways, etc., has been created.

A safety inspector, or face boss, as generally called in some places, has been employed to visit the working faces, talk with the miners, inform them on matters pertaining to their safety and give them such orders as he may deem necessary for their protection. This inspector is also under instructions to stop work at any place which he considers unsafe, until it is made safe; he is also to make a detailed record of all cases where he finds the miner neglectful of his own safety, which is filed in the main office.

The cooperation of the State and county inspectors, Miners' local officials, and every one interested in the work is enlisted and no effort is spared to make safety the first consideration at all times. Mottoes are printed on all pay envelopes of the miners, suggesting the importance of their looking after their own safety and warning them of the constant danger incident to coal mining.

The first aid corps was organized there at the time the rescue car. Superior, visited that place, and all expenses of their training and equipment was paid by the company. The interest in this work is maintained by the company as well as by the miners, and it is a source of pride to see the miners showing such zeal in the work. Red Cross emergency outfits are furnished at each mine and these first aid men are called on to attend every injury requiring surgical attention. This corps of first aid men are graduates of the Rescue Station at Springfield, and a class of students are being instructed by them in first aid and rescue work; regular sessions being held weekly for the purpose. To further equip this department the following has been purchased, to be used in the rescue stations at the mine: Three Draeger mouth breathing, 2-hour rescue apparatus, 3 Draeger emergency ½-hour capacity complete, 3 Fluess proto apparatus complete, 1 pulmator complete, with extra oxygen cylinder, electric handlights, extra charging tanks, supply tanks, testing apparatus and complete recharging devices. This equipment is divided between the three mines and a properly arranged rescue station at the general office, where three sets of the apparatus with the pulmator and the charging device will be kept for service at either mine.

FATAL ACCIDENTS.

July 20, 1911, B. Kohl, machine runner, aged 35 years, single, employed in Royal Colliery Company's mine No. 1, Virden, Macoupin County, was instantly killed by a shock from an electric wire.

July 26, 1911, Felix Catilans, shot firer, aged 35 years, single, was killed by a premature shot in the Royal Colliery Co.'s mine No. 1, Virden, Macoupin County.