

FOURTH DISTRICT---1890.

MR. JOHN S. LORD,

Secretary of the State Bureau of Labor Statistics, Springfield, Ill.

SIR: In compliance with section twelve of the mining code of the State, defining the duties of State Inspectors of mines, I herewith submit the seventh annual report of the Fourth district for the year ending June 30th, 1890.

The following report gives tabulated statements, showing the number of collieries, both shipping and local, the number of new mines, also the number of abandoned mines; the number of miners and other employés, and boys employed, during the summer and winter months; the number of days worked at each mine, with an average for each county and the whole district; the prices of mining and the value of the coal at the mines; also the number of mining machines, and the number of employés operating them, with the tonnage of the machines in each county; the quantity of blasting powder used and the total valuation of the coal at the mine; a record is given of all fatal and non-fatal accidents, with a recapitulation of all the mining counties in the district.

The following summaries are presented for the district:

Total number of mines	137
Shipping mines.....	55
Local mines	82
New mines.....	47
Abandoned or exhausted mines.....	4
Number of employés, miners	3,327
Number of other employés in and about the mines, including 123 boys.....	2,358
Total number of employés.....	5,685
Average number of working days for the district.....	214
Total number of kegs of powder used.....	64,369
Average price for mining in summer.....	\$0 58
Average price for mining in winter.....	\$0 60
Number of tons of coal produced.....	3,716,464
Average value of coal at the mines.....	\$0 87.29
Aggregate value of coal at the mines.....	\$3,243,929
Number of mining machines used: Harrison, 128; Legg, 3; Chouteau, 17; Ingersoll—Sargent, 4	152

Output in tons by machines.....	1,615,453
Number of employés operating the machines.....	1,614
Number of fatal accidents.....	11
Number of non-fatal accidents.....	71
Total number of accidents	82
Number of employés to each fatal accident.....	517
Number of employés to each non-fatal accident.....	80
Number of tons produced for each fatal accident.....	337,860
Number of tons produced for each non-fatal accident.....	52,344

Improvements.—A number of important improvements have been made in and around the mines of the district during the year.

In Madison county, the Consolidated Coal Co., of St. Louis, has made connections between the Troy shaft and Brookside shaft, giving a better means of escapement in case of accident to either shaft. Two new boilers have been put in at the Troy shaft. The hoisting shaft at Heintz Bluff has been retimbered and new cages put in. At the Macoupin county mines, the escapement shaft at No. 7 colliery has been retimbered, and a new automatic slack dump has been erected at No. 6 colliery at Staunton. A new and improved screen plant has been erected at this company's Gillespie colliery, Gillespie; the coal as it leaves the cage is dumped into a hopper, where it passes on to perforated steel plates; the plates are given a shaking motion by eccentrics from an engine shaft; the slack is taken completely out of the coal; after leaving the plates the lump coal then passes on to conveyors, or traveling tables, where all impurities are taken out of the coal by being hand-picked by boys, leaving the lump coal perfectly clean as it passes into the railroad flats. The screen has worked very successfully since erected, which is a credit to the general management of these mines. This is a new departure in screening our Illinois soft coal, and at all large mines the plan will certainly be adopted. This company has put in four new boilers, a new compressor, new tower and top works at their St. Barnard colliery, at Clyde, more royalty has been secured and new entries opened into it, which means a bright future for this colliery.

The Mount Olive Coal Co. has completed its escapement shaft during the year. The Victor Coal Co., at Roodhouse, and the Jacksonville Coal Co., at Jacksonville, have completed their escapement shafts during the year. The Coffeen Coal Co. has put in a 12-foot fan (Brazil manufacture), and the Virden Coal Co. has put in a 15-foot fan (Alton manufacture), both of which are giving very good satisfaction.

The Chouteau and Ingersoll-Sargent mining machines have been introduced into the Girard colliery. This company experimented for about one year with the Smith Electric Coal Cutting machines, but the machines not giving satisfaction, they were withdrawn and compressed air machines introduced. The Chouteau and Ingersoll-Sargent machines are giving very good satisfaction. A new shaking screen has been introduced at this colliery which makes a better article of nut and pea coal than the ordinary re-