

Tons of coal cut by machines.....	1,054,678
Number of tons of coal produced to each fatal accident.....	785,138
Number of tons of coal produced to each non-fatal accident.....	81,785
Number of persons employed to each fatal accident.....	1,218
Number of persons employed to each non-fatal accident.....	143
Estimated annual capacity, in tons, of existing mines as now equipped.....	9,537,550

Coal production by counties in the Fifth District, with increase or decrease in each, for the years ending July 1, 1897, and July 1, 1898.

COUNTIES.	TOTAL OUTPUT IN TONS.		Increase.	Decrease.
	1897.	1898.		
Callhoun.....	3,868	4,893	1,025	
Christian.....	837,897	495,616		342,281
Greene.....	7,200	8,520	1,320	
Jersey.....		1,680	1,680	
Morgan.....		1,800	1,800	
Macoupin.....	1,975,981	1,264,926		711,055
Montgomery.....	251,249	294,667	43,418	
Sangamon.....	1,898,453	1,763,863		74,590
Scott.....	25,125	21,337		3,788
Shelby.....	69,329	68,388		941
Total.....	5,009,102	3,925,690	49,243	1,132,655
Decrease.....				1,132,655
Increase.....				49,243
Net decrease.....				1,083,412

The district shows a decrease in output of 1,083,412 tons. This is owing to the general strike of 1897, and the lockout since April 1, 1898, of the mines on the Chicago & Alton railroad south of Springfield, and the mines in the Pana coal field. The mines of the Consolidated Coal Co., which embrace six of the largest mines in the district, worked about seven months in the year. The mines at Pana, Taylorville and Assumption, which are all large mines, worked about six months in the year. The Madison Coal Company's mine at Mt. Olive, which is also one of the largest mines, worked about six months. The mines in Sangamon county worked about nine months. Montgomery county shows an increase in output of 43,418 tons. This is owing to the fact that the Coffeen Coal Mining & Coke Co.'s mine was operated continuously with a large force of men during the three months' strike in 1897, and to the opening out of the Montgomery Coal Co.'s shaft at Paisley, and the new shaft at Raymond. Owing to the strike of 1897, and the various suspensions on April 1, 1898, the output of the district is 1,500,000 tons less than it would have been had the mines been worked the same number of days that they were in 1897. The following mines have not been worked since April 1, 1898: Those of the Pana Coal Co., the Penwell Coal & Mining Co., the Springside Coal & Mining Co., the Nilwood Carbon Coal Co., the O'Gara & King Coal Co., the Virden Coal Co. and the Chicago-Virden Coal Co.'s Nos. 1 and 2. These various coal companies claim they can not pay the scale price as fixed at Springfield last spring and run their mines at a profit. The Carlinville Coal Co., the Girard Coal Co. and the Auburn Coal Co. are paying

the scale price and operating their mines. They are in the same coal field with the companies refusing to pay the scale.

Mine Fire.—At the Girard Coal Co.'s mine, at Girard, a fire broke out on the night of April 2, 1898, which destroyed the fan-house, fan, engine, rope and cage in the escapement shaft, burning the curbing partly at the top of the shaft. A new fan-house, fan, ropes and cage have been put in during the year and the shaft at the surface has been retimbered.

Improvements.—For a more effective ventilation at the mines new fans twenty feet in diameter have been erected at the mines of the Madison Coal Co. at Mount Olive, of the Springside Coal Mining Co. at Pana, of the Moweaqua Coal Mining & Manufacturing Co. at Moweaqua, of the Carlinville Coal Co. at Carlinville, and of the Chicago-Virden Coal Co.'s No. 1 mine at Virden. A new fan sixteen feet in diameter is erected at the mine of the Springfield Coal Mining & Tile Co., Springfield, and also at the mine of the Cantrall Coöperative Coal Co. at Cantrall. A new boiler has been put in by the Carlinville Coal Co. with a steam pipe line from the main shaft to the fan and hoisting engine at the escapement shaft. The endless-rope cable has been extended for a distance of one half mile in the Springside Coal Mining Co.'s shaft at Pana.

Shaking screens for the more effective cleaning of the coal have been put in at the mines of the Junction Mining Co., the Black Diamond Coal Mining & Tile Co. and the Woodside Coal Co. at Springfield, also at the mines of the Wabash Coal Co. at Dawson, and of the Spaulding Coal Co. at Spaulding.

Coal-cutting machinery has been put in at the mines of the Thomas Pressed Brick Company, at Golden Eagle, the Raymond Coal Company, at Raymond, the Hillsboro Coal Company, at Hillsboro, and the Chicago-Virden Coal Company, at Virden. An Ingersoll air compressor and an Ingersoll-Sergeant pick machine is used at Golden Eagle. A Norwalk air compressor and one Ingersoll and one Sullivan pick machine is used at Raymond.

At the Hillsboro mine a very effective engine and dynamo plant is put in. The company is running four Morgan-Gardner chain-breast machines. Around the shaft bottom and at all main doors in the workings electric lights are erected.

At Virden, at the mine of the Chicago-Virden Coal Company, the dynamo and engine are about the same as at Hillsboro. The company is using eight Link-belt chain-breast coal-cutting machines, and electric lights are used around the bottom of the shaft.

The Consolidated Coal Company has extended the cable haulage for a distance of 1,200 feet in their No. 6 mine at Staunton.

The Madison Coal Company has dug a large storage reservoir, affording an ample supply of water for the mine, and has also put in improved coal conveyors at their No. 5 mine at Mount Olive.

New Mines.—The Raymond Coal Company has opened a mine during the year; the shaft is 434 feet deep and the coal seam is 3 feet 3 inches in thickness. The coal is mined by coal-cutting machines. The hoisting engine is second motion, with suitable steam power.