REPORT OF STATE INSPECTOR OF MINES.

Office of Inspector of Mines, Indianapolis, Ind., February 15, 1904.

Prof. W. S. Blatchley, State Geologist:

Dear Sir—I have the honor to submit to you herewith my fifth annual report as Inspector of Mines, covering the calendar year of 1903, and being the Twenty-fifth Annual Report of this Department, and the thirteenth made to the Department of Geology and Natural Resources.

I trust it will receive your approval and be found worthy of consideration by the public.

JAMES EPPERSON, Inspector of Mines.

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INTRODUCTION.

The subject matter of this report is treated under the several captions—

Review of coal trade.

Labor conditions.

Mine casualties.

Statistical.

In the review of coal trade, all of the mining conditions existing in 1903, including the railroad service, is treated as fully as possible.

Under the head of labor conditions we include strikes, Terre Haute and Brazil agreements, and other conditions pertaining to labor. Under mine casualties, various tables are given, exhibiting the cause, number and frequency of accidents to mine employes, also accidents to mine property.

The statistical part of the report gives tables showing the production of coal, number of mine employes, number of mining machines in use, number of mules, number of kegs of powder, tables of averages and comparative tables. These same subjects have all been treated in our former reports. However, by referring to the table of contents, it will be found that we have given some additional information which will be of interest and value to the general public. The production of coal and its distribution and the wages paid to employes have been treated in the same general manner as in our former reports. Mine accidents have been put in more complete form, in tables showing the age and nationality of persons killed and the number of dependents left at each death.

There has also been included the following additional tables, viz: -a table showing the number of kegs of powder used in the mines during the year 1903, the price paid per keg and the number of tons of coal produced per keg; a table of mine haulage showing the number and kind of motors in use, and the number of

mines at which rope haulage is used (the same table shows the number of steam boilers, number of dynamos, and the number of compressers in use at Indiana mines), and a table showing by counties the name of mines using box car loaders; a table giving the average price per ton for machine and pick mining from 1900 to 1903, inclusive; also the percentage of gain over 1900.

Assistant Inspector of Mines, Charles Long, resigned September 15, and Jonathan Thomas, of Carbon, was appointed to fill the vacancy. His work in inspections and reports has been eminently satisfactory.

TABLE,

Showing by Months and by Counties the Number of Tons Mined and Wages Paid to Employes for the Year 1903 at Mines Employing More Than Ten Men.

· MONTEN	CLAY C	OUNTY.	DAVIESS COUNTY.			
MONTHS.	Tonnage.	Wages.	Tonnage.	Wages.		
January February March April May. June July August September October November	148,913 129,257 105,127 61,505 72,630 82,746 91,740 110,666 125,242 101,901 109,958	\$137,440 40 123,294 13 111,976 05 88,794 64 94,035 42 107,215 42 104,695 42 110,293 65 131,249 92 147,322 89 124,878 07 134,322 05	21,265 17,772 12,125 11,712 17,663 17,818 14,543 3,380 15,388 21,286 16,748 21,459	\$19,280 16,778 1: 11,584 9: 12,082 7: 18,079 8: 17,788 8: 14,662 6: 3,388 22 15,930 1: 23,120 5: 19,561 1: 23,184 0:		
Total	1,222,431	\$1,415,508 06	191,159	\$ 195,442 1		

	FOUNTAIN	COUNTY.	GIBSON COUNTY.		
January February March April May June July August September October November December	3,717 2,329 2,395 2,411 2,728 2,748		8,196 6,111 6,615 4,440 1,250 2,050 2,520 2,896 3,967 1,099 3,378 4,868	\$3,976 83 5,510 70 5,708 90 4,456 33 1,419 53 3,172 50 4,674 00 4,921 15 5,330 33 2,988 89 4,234 57 4,838 84	

	GREENE	COUNTY.	KNOX COUNTY		
January February March April May June July August September October November December	207,263 176,073 213,253 132,258 143,737 149,310 167,108 166,061 191,480 226,350 225,026 228,202	\$177,988 94 113,136 58 155,856 36 119,388 85 132,801 63 136,216 23 145,150 04 169,861 38 198,018 03 195,092 70 192,371 33	14,902 11,922 12,316 8,372 8,811 9,457 7,144 7,783 10,956 13,689 16,549 16,048	\$12,706 01 10,096 65 9,693 43 6,937 11 7,059 96 8,115 18 6,565 66 6,224 38 15,014 20 12,517 42 13,482 27 14,179 24	
Total	2,226,789	\$1,888,045 39	137,949	122,591 61	

			· ,			
MONTHS.	PARKE	COUNTY.	PERRY	COUNTY.		
	Tonnage.	Wages.	Tonnage.	Wages.		
January February March April May June July August September October November December	82,339 96,457 41,905 50,218 56,282	\$98,818 93 85,746 06 87,297 64 53,864 03 65,015 92 74,067 83 82,999 70 99,452 89 104,850 54 118,260 48 104,298 2 113,871 72	1,419. 1,164 1,200 1,124 799 1,016 615 6 91 849 786 451	\$1,436 04 856 35 1,027 11 1,070 49 785 50 962 01 1,115 35 669 03 947 83 969 77 626 62		
Total	922,994	\$1,088,504 26	11,120	\$11,115 35		
1	PIKE C	OUNTY.	SULLIVAN	COUNTY.		
January February March April May June July August September October November December Total	58,638 46,231 52,274 26,807 27,868 28,883 27,203 34,612 44,843 54,404 39,449 43,016	\$48,542,56 38,300,06 43,478,35 27,144,71 28,825,00 28,422,16 30,552,83 33,305,64 42,419,56 50,062,51 37,912,65 40,965,91	157,521 122,053 129,168 100,227 104,804 117,979 120,818 140,739 142,610 142,075 133,776 141,568	\$104,955 00 93,230 36 96,240 74 82,658 38 84,654 38 84,657 07 117,939 01 123,671 07 113,602 97 122,261 13		
	VANDEDDID	OH COHNEY	WEDNILLIO	N COUNTY		
	VANDERBUR	GH COUNTY.	VERMILLIO	N COUNTY.		
January February February April March April June June July August September October November December. Total	28,085 22,661 13,278 9,896 11,439 9,600 12,607 13,791 18,465 23,690 20,356 20,330	\$18,645 59 16,198 87 11,1954 71 9,988 06 11,413 49 10,172 17 12,812 71 14,335 96 19,254 98 25,442 18 21,169 25 192,735 78	74,010 81,861 84,634 49,138 63,290 76,445 84,433 82,472 80,170 77,424 94,165	\$53,347 68 60,535 37 62,306 03 31,095 39 51,952 76 61,036 12 68,105 28 67,183 38 64,747 20 67,233 18 80,642 67 80,462 87		
	VIGO CO	OUNTY.	WARRICK	COUNTY.		
January. February March April May June June August September October November	166,397 138,299 128,887 205,695 106,326 116,111 137,471 141,329 146,334 139,677 153,582	\$144,136 62 122,125 61 105,251 85 86,076 80 105,933 90 102,767 32 121,859 55 128,638 43 134,227 00 154,976 54 151,041 03	30,886 25,199 25,481 20,661 15,572 21,444 19,967 25,554 24,744 31,701 37,047 37,385	\$19,063 78 15,163 93 18,308 34 15,191 91 12,953 22 14,707 261 12,974 32 18,022 16 18,463 02 22,679 58 25,201 21 21,753 05		
Total	1,716,726	1,493,761 80	315,641	\$214,481 75		

REVIEW OF COAL TRADE.

The year just ended has been one of the most remarkable in the history of the mining industry of the State, more mines having been opened, more coal produced and more wages paid to employes. The total production, which reached 9,992,553 gross tons, shows a net increase of 1,229,356 tons, or nearly fourteen and This large increase is mainly one-fourth per cent. over 1902. attributable to the new mines opened, thirty-seven in number, yet as large as was the increase in production, it would have been very much greater had it not been for the shortage in railroad cars and lack of transportation facilities. This is especially true of the mines along the Southern Indiana Railroad. One mine on this road, viz: the Black Creek Mine, one of the largest producers in Greene County, fell short of the 1902 production something over thirty thousand tons. The Southern Indiana Railroad, however, was amply able to furnish both cars and transportation to the mines along its line had it not been for the numerous embargoes laid on the coal from their road by other railroads on which they were dependent for an outlet. To the general public, it would seem that the fault for this condition of affairs, attached to the railroads, yet, before placing the blame, it would be well to recall the following factors which should be taken into consideration, viz: the number of new mines that have been opened within the year, the number of railroad cars required to operate a fully developed mine, at say two-thirds time, and the interval from date of shipment of loaded cars and the returning of them to the mine, as well as the excessively heavy freight traffic of all kinds. close railroad estimate gives thirteen days as the time required to ship a car of coal from the Linton field to Chicago and return the empty. Owing to transfers and other delays, it is presumed that the same would hold good for Indianapolis, while at some points in the gas belt it would require even a greater lapse of time. We must also bear in mind the additional fact that the majority of mines opened recently to operate at full capacity, require from twenty to fifty cars per day. From this it will be seen that the new mines have been opened so rapidly that the consequent demand for railroad cars and motive power could not be furnished to meet the increased requirements.

The market price of coal, while not as high as it was at times in 1902, on the whole has been very good, ranging from \$1.15 to \$1.45 per ton, mine-run, and mines have undoubtedly been operated at a profit.

The aggregate wages paid in 1903 amounted to \$9,149,572.12, an increase over 1902 of \$2,070,659.00, or nearly twenty and nine-tenths per cent., while the total number of mine employes was 15,128, an increase of 1,989, or a fraction over fifteen and one-tenth per cent. over 1902. The average wages paid to mine employes in 1902 was five hundred and thirty-eight dollars and seventy-seven cents per employe. In 1903 it was six hundred and four dollars and fourteen cents, an increase over 1902 of sixty-five dollars and thirty-seven cents per mine employe.

Considering the time lost at the different mines the above figures speak well as to the condition of miners and others employed about the mines.

NEW INVESTMENTS.

New investments within the year embrace mainly the opening of new mines, as reported before, thirty-seven in number, nearly all of which are equipped with up-to-date machinery, and will be classed among the largest producers.

IMPROVEMENTS, AND CHANGES IN OWNERSHIP OF MINING PROPERTIES.

One hundred and sixty-eight thousand seventy-one dollars and ninety-six cents was reported to this office as having been spent on improvements of various kinds at Indiana mines, during the year 1903. Owing to the large increase of new mines, and the fact that the purpose for which the money was used was not always reported, it is presumed that a part of that sum was expended in equipping the new mines.

The following will show the changes in ownership and some of the most important improvements that have been made:

The Rebstock, a new block coal mine, in Clay County, was opened during the summer by the I. McIntosh Coal Company, changed ownership in November, and is now owned and operated by the Crawford Coal Company, who classes it as their No. 9 Mine.

The Rob Roy, also a block mine, located near Brazil, owned by the Andrews Coal and Mining Company, was purchased during the summer by the United Coal Company, who operated it a shorttime before abandoning.

The Otter Creek Coal Company have equipped their Mary Mine, in Parke County, with six electric chain machines.

The Petersburg Mine, in Pike County, owned by the J. Wooley Coal Company, of Evansville, was purchased during the month of June by the Muncie Coal and Mining Company. They have made extensive improvements with a view of increasing the capacity of the mine.

The S. H. Wulfman Coal Company, Pike County, have expended several thousand dollars in improving their Hartwell Mine, building a new tipple, equipped with shaker screens, installing electric motor haulage, which should give the mine a capacity equal to any mine in the southern part of the State.

The Rainbow Coal and Mining Company, Sullivan County, made some very extensive improvements at their Caledona Mine, equipping the hoisting shaft, remodeling the tipple, head frame, etc. They equipped the mine with electric mining machines and motor haulage, in addition to having sunk a new air shaft at the head of the workings, equipping it with a high-speed electric fan, from which excellent results have been obtained in the way of ventilation.

The Mildred Mine, in Sullivan County, is a new mine opened late in the fall by the Busron Coal Company. The J. Wooley Coal Company purchased this mine about the time the mine was completed and ready to ship coal.

The Brazil Mining Company and the Miami Coal Company, in Vigo County, formed a consolidation in November, and are now operating under the name of the latter company.

The Big Four Mine, Warrick County, located at Boonville, and the DeForest Mine, located at DeForest, both of which were formerly ventilated by furnace, have been equipped with fans, and in both instances excellent results have been obtained.

The Victoria Mine, located near Linton, Greene County, formerly owned by the Victoria Coal Company, was purchased early in the year by L. T. Dickason. This mine is operated under the original name.

The Island Coal Company, Greene County, have replaced the rope haulage in their No. 2 Mine, with electric motor haulage.

The Greene Valley Coal Company, Greene County, have installed a box car loader at their Greene Valley Mine, which proved of great value during the busy season when cars were scarce.

The Lattas Creek Coal Company, Greene County, and the Northwest Coal Company, have installed box car loaders.

The Lynn Coal Company, Knox County, was reorganized during the year, and their mine, which was formerly operated as a wagon mine, supplying the town of Bicknell and the adjacent country, now has a mine switch from the main line of the I. & V. Railroad. The mine has also been thoroughly equipped with upto-date machinery, including shaker screens. At present it has a capacity of about five hundred tons per day, employing seventy-five miners.

O'Cara King & Company purchased the Lyford Mine, in Parke County, in April. The Wabash Valley Coal Company formerly owned this mine. The present Company equipped the mine with electric chain mining machines and other modern improvements.

NEW MINES.

Thirty-four bituminous and three block coal mines have gone into operation within the past year, distributed in the different counties as follows:

Clay County, six; Daviess County, two; Fountain County, one; Greene County, six; Knox County, one; Parke County, three; Sullivan County, ten; Vermillion County, two; Vigo County, five, and Warrick County, one. Twenty-three of these, as shown by the following table, are hand or pick mines, while of the remaining fourteen there are three compressed air puncher ma-

chines, and eleven electric chain machine mines, which with few exceptions are equipped with the latest improved mining machinery of all kinds, such as self-dumping cages, shaker screens, box car loaders, first motion hoisting engines, etc., incident to handling a large output of coal and preparing it to suit the various market demands.

In the following table will be found the names of the companies owning and operating these new mines, the names of the mines, the railroad on which they are located, the geological number and thickness of coal seams, the depth and size of shaft, the kind of mines, the kind of machines used, when mines were commenced and when first shipment of coal was made.

TABLE OF NEW MINES.

BLOCK MINES.

CLAY COUNTY.

COMPANY.	MINE.	Railroad.	Geological Number of Seam.	Thickness of Seam.	Depth of Shaft.	Size of Shaft.	Machine or Pick Mine.	Kind of Machine.	Beginning of Operation	First Shipmont.
Continental Clay Works Crawford Coal Company Brazil Block Coal No. 7	Continental	C. & E. I C. & E. I Vandalia	·III	4' 3' 3" 4'	65 85 105	8 x 20 7 x 14 8 x 17	Pick Pick Pick	,	10-1, '02 7, '03 '02	7, '03 11-21, '03 2-1, '03
BITUMINOUS MINES. CLAY COUNTY.										
Indiana Bituminous Coal Co Lewis Coal and Mining Co Zellar McClellan & Company	Fair View	Vandalia Southern Ind Vandalia	VI V VI	7' 6'' 9' 7'	80 77 90	9 x 19 8 x 15 8 x 21	Pick Pick		8-1, '03 8-26, '03 8-26, '03	10-1, '03 7-1, '03 10, '03
	·	DAVIES	S COUN	TY.						
Washington-Wheatland Coal Co Mandabach Bros	Wheatland Mandabach	B. & O. S. W E. & I	IV V	5' 6'	100 56	8 x 17 6 x 12	Pick Pick		11-1, '02	7-20, '03 7-1, '03
FOUNTAIN COUNTY.										
Silverwood Coal Co	Silverwood	Cloverleaf	v				Pick			12-1, '03

GREENE COUNTY.

Hoosier Coal Co North Western Coal Co Johnson Coal and M. Co Lisland Coal Co Letsinger Coal Co Coal Bluff Mining Co	Hoosier No. 2 North Western No. 3 Atlas No. 2 Island No. 5 Letsinger Twin	Southern Ind Southern Ind I. & V Southern Ind Southern Ind I. & V	V IV IV IV III IV	7' 5' 5' 5' 7' 6"	46 75 128 55	9 x 17 9 x 16 9 x 16 8 x 19	Machine Machine Machine Pick Machine Machine	Elec. chain. Elec. chain. Elec chain. Comp. air	8, '02 12, '02 7, '03 '02	11, '03 2, '03 8, '03 8, '03 2, '03 10, '03
		KNOX	COUNT	Y.			-	,		'
Enterprise							•			
		PARKE	COUN'	ΓY.	-					
Parke County Coal Co	Parke No. 11. Minshall No. 2. Briar Hill. Mecca No. 4.	T. H. & L., Van- dalia, Logansport T. H. & L.	VI V VI	6′ 6″ 5′ 5′	102 107 Drift	8 x 16 9 x 18 Compa	Machine Pick ny bought	Comp. air		1, '03 11-20, '03 1, '03
SULLIVAN COUNTY.										
Mammoth Vein Coal Co. Little Giant Coal Co. Indiana Hocking Coal Co. Bruilettes Creek Coal Co. J. Woolley Coal Co. Island Coal Company Cummins Coal Co. Citizens Coal Co. Coal Bluff Mining Co. North Jackson Hill Coal Co.	Mammoth Vein Little Giant Lablanch Bruilette's Cr'k No. 6 Mildred. Cummins Citizens. Superior No. 1 St. Clair	E. & T. H	VI VI VII VII VII VII VII VII VII	6' 6'' 5' 6'' 4' 6'' 5' 6'' 5' 6'' 5' 6'' 5' 6''	221 80 144 260 Slope 165 112 197	9 x 15 9 x 16 9 x 19 9 x 16 8 x 17 9 x 17 8 x 16 9 x 18 9 x 18	Machine Machine Machine Machine Machine Pick Pick Pick Pick	Elec. chain Elec. chain. Elec. chain. Elec. chain. Comp. air.	Spring,'03 Fall, '02 8, '03 Fall, '03 5-10, '03 3, '03 Fall, '02 6, '03 6, '03	12, '03 7, '03 12, '03 12, '03 11, '03 8, '03 11, '03 11, '03

TABLE OF NEW MINES-Continued.

BITUMINOUS MINES-Continued.

VERMILLION COUNTY.

COMPANY.	MINE.	ailroad.	eological Number of Seam.	Thickness of Seam.	epth of Shaft.	ize of Shaft.	lachine or Pick Mine.	Kind of Machine.	Beginning of Operation.	First Shipment.
Clinton Coal Company	Crown Hill No. 2	C. & E. I	<u> </u>	5′ 5′ 6″	151 100	8 x 16 8 x 17	Piek Pick	<u> </u>	5-1, '03 Fall, '03	7-14, '03 10-1, '03
VIGO COUNTY.										

Miami Coal Co	Sugar Creek	C. & E. I	VI VI V	6' 6" 6' 6' 6'		8 x 16 8 x 10 10 x 20 9 x 16	Pick	 19 209	5-1, '03 9-1, '03 10-20, '03 9-1, '03

WARRICK COUNTY.

T. D. Scales Coal Co.	Scales	Southern Ind	v .	7′	30	9 x 18	Machine	Comp. air	Fall, '02	6-1, '03
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Note.—There are two seams opened at the Twin Mine, viz., No. IV and No. V. No. IV is found at a depth of one hundred and fifty feet from the surface, carrying four feet in thickness. No. V lies at a depth of fifty-six feet from the surface, six feet thick, and is opened by a double shaft nine by thirty feet in size, the coal from both being hoisted from the same opening. The steam boilers, hoisting engines, dynamos and other machinery are concentrated into one power plant, thereby causing a considerable saving in steam and electric power, labor and fuel, which are necessary to generate such power and operate the machinery, as well as labor in many other departments in and about a mine. There is also a saving in mine buildings, as one blacksmith shop, one carpenter shop, one powder magazine, one fan and fan house, one mule barn, etc., will answer for the two mines.

In addition to the above, the No. IV mine has been equipped with a system of light motor haulage with which it is the purpose to gather the coal direct from the working faces. If successful (there being no good reason why it should not) this will result in an immense saving in the cost of brushing the roadways for height, which on account of the thinness of the coal seam, would be necessary if mule haulage were used.

The sinking and equipping of a mine in this manner, with the existing conditions, is the first attempt of the kind in the State, and results are being very closely watched by those interested in mines and mining. The success of the motor haulage is especially interesting to the general public, as a problem will then perhaps have been solved which will place some of our thin coal seams on a better competitive basis with the thicker ones, and in many instances making it possible to operate mines at a profit in certain coal fields which are now considered worthless on account of such conditions as referred to above, thereby enhancing the value of such lands, also adding greatly to the value of workable coal in the State, the latter being a factor which at some future day will become an important one in connection with our fuel supply.

ABANDONED MINES.

Table Showing Names of Mines, Company and Month of Abandonmer	Table &	Showing	Names of	Mines,	Company	and .	Month of	Abandonmen
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NAME OF MINE.	COMPANY.	COUNTY.	Month.
Brazil Block No. 11	Clay City Coal Company Eureka Block Coal Company Coal Bluff Mining Company Indiana Bituminous Coal Company Indiana Bituminous Coal Company Bruilette's Creek Coal Company Terre Haute Brick and Pipe Co Brazil Mining Company	Clay	March. March. January. July. October. February. January. June. September.

Labor conditions, as a whole, have been very satisfactory during the year, there having been but few strikes, other than local, and these usually lasted but a few days. The strike at the Black Creek Mine, during the summer, originating over the discharge of a driver for beating a mule, was of longer duration than any other. It was in effect some three weeks. We give herewith the Terre Haute and Brazil Agreements.

TERRE HAUTE AGREEMENT.

APRIL 1, 1903, 70 MARCH 31, 1904.

Pursuant to an agreement made between the Coal Operators and United Mine Workers of America of Illinois, Indiana, Ohio and Pennsylvania, made at Indianapolis, Ind., February 7, 1903, the price of mining for bituminous coal in the State of Indiana shall be 90 cents per ton of 2,000 pounds for screened lump coal, made over a standard screen, and 55 cents per ton of 2,000 pounds for run-of-mine. That further details in scale of prices for pick and machine mining in the State of Indiana for one year, beginning April 1, 1903, shall be as follows:

The standard height of coal in Indiana shall be 3 feet 6 inches, excepting in mines already opened, where the standard height shall be 3 feet 3 inches. All coal less than 3 feet 3 inches in thickness and over 2 feet 9 inches, the price shall be 98 cents per ton for screened lump coal, and 64 cents per ton for mine-run coal. All coal less than 2 feet 9 inches and down to 2 feet 6 inches, the price shall be 106 cents per ton for screened lump coal and 65 cents per ton for mine-run coal.

Narrow entries 7 to 9 feet wide, \$1.86% per yard.

Wide entries 12 feet wide, \$1.161/2 per yard.

Wide entries shall not be more than 13 feet nor less than 11 feet. In the event of a 10 or 11 feet entry being demanded by the operator, narrow entry prices shall be paid, if 14, 15, 16 or 17 feet entries are demanded the wide price shall be paid.

The right of the operators to drive an 18 foot room when necessary shall not be questioned.

BREAK THROUGHS.

Break throughs between entries shall be paid for at entry prices.

Break throughs between rooms, when sheared or blocked, shall be paid for at entry prices, but no break throughs shall be driven without consent of the operators. Nothing herein shall interfere with the law governing break throughs.

ROOM TURNING.

Room necks to be driven 12 feet in and widened at an angle of 45 degrees when so desired by the operator. Any distance in excess of above shall be paid for proportionately, but no room neck shall exceed 15 feet. When room necks are driven 12 feet wide, the price shall be % of regular price, or \$2.814.

MACHINE MINING.

In entries 7 to 9 feet wide...... \$1 34

In entries 12 feet wide, % of price for narrow entries, or 83½. Narrow work after punching machines shall be sheared when demanded by the operator. Narrow work after the chain machine must be done in a workmanlike manner.

BREAK THROUGHS.

Break throughs between entries, same as entry prices. Break throughs between rooms shall be paid for at same price when similarly driven.

ROOM TURNING— $\$3.37\frac{1}{2}$.

Room necks to be driven 12 feet in and widened at an angle of 45 degrees when so desired by the operators. Any distance in excess of above shall be paid for proportionately, but no room neck shall exceed 15 feet. When room necks are driven 12 feet wide, price shall be % of regular price, or \$2.10.

DAY WORK FOR PUNCHING MACHINE.

Machine work, when paid for by the day, shall be for:

 Machine runner
 \$3 17

 Helper
 2 56

DAY WORK, CHAIN OR CUTTER BAR MACHINE.

When paid for by the day, shall be for:

 Machine runner
 \$3 01

 Helper
 3 01

Day work by machines shall apply only to opening new mines and defective work, such as horsebacks, etc.

PRICE PER TON FOR MACHINE MINING FOR PUNCHING MACHINE.

Vandalia track and north thereof:

Screened lump.—Runner, 11½ cents; helper, 10½ cents; loading, shooting and timbering, 50 cents. Total, 72 cents.

Run-of-Mine.—Runner, 7½ cents; helper, 7 cents; loading, shooting and timbering, 30½ cents. Total, 45 cents.

South of Vandalia track:

Screened Lump.—Runner, 10½ cents; helper, 9 and 3-10 cents; loading, shooting and timbering, 52 and 2-10 cents. Total, 72 cents.

Run-of-Mine.—Runner, 6 and 6-10 cents; helper, 6 and 6-10 cents; loading, shooting and timbering, 32 and 3-10 cents. Total, 45 cents.

FOR CHAIN MACHINE

Screened Lump.—Runner, 6½ cents; helper, 6½ cents; loading, shooting and timbering, 56 cents. Total, 68½ cents.

Run-of-Mine.—Runner, 4 cents; helper, 4 cents; loading, shooting and timbering, 34½ cents. Total, 42½ cents.

Machine shovels shall be furnished by the operators, but when replaced the old shovels must be returned, and in case of careless breaking or destruction, the helper shall pay for the shovel so destroyed.

BLACKSMITHING.

Price of blacksmithing shall be 1\(\frac{1}{4}\) cents on the dollar.

Sharpening shall be done in a workmanlike manner, and men shall not have to wait for their tools.

DAY LABOR.

Inside day labor shall not be less than \$2.56 per day of eight hours, when men are employed. And for outside day labor on and north of the B. & O. S. W., the minimum price shall be \$2.02½ per day.

South of the B. & O. S. W., the price shall be 201/4 cents per hour.

All outside day laborers working at the mines, excepting weighmasters, flat trimmer and dumper, who shall be regarded strictly as company men, shall be recognized as members of the United Mine Workers of America, and present conditions and hours of labor shall prevail during the existence of this contract; and, provided further, that in emergencies or in the absence of any regular employe the right of the operator to employ men not members of the United Mine Workers of America for outside day labor, shall not be questioned.

Any and all flat trimmers shall dock for dirty coal.

DEAD WORK.

1. It is agreed that the companies shall have the working places as dry as local conditions will permit, and said working places shall be in working condition at time of starting work in the morning. If any companies shall fail to have said working places dry or reasonably so one hour after starting time two successive days, the company shall, if said failure is traceable to neglect or carelessness of the company's agent,

give miner or miners so affected other work or pay him or them for time so lost.

- 2. The question of slate in or over the coal shall be and is regarded a local question to be taken up and adjusted by the methods provided in the annual Terre Haute agreement for the settlement of disputes. Provided, however, that established usages and prevailing conditions shall not be changed except in new mines where they have not been considered and adjusted.
- 3. Where bottom coal is excessively hard to take up, the operator shall have the option. If he demands that it be taken up he shall pay extra therefor. Provided, that where coal so left shall exceed 4 inches in thickness it shall be taken up by the loaders and paid for by the machine men, but this shall not apply when caused by sulphur boulders, rock or any unusual condition. And whenever there shall arise a dispute between any loader and boss, or committee and boss, as to whether the bottom coal in any room is "excessively hard," the company interested shall select a man who shall take up one-third of such bottom coal, and if by such test it requires more than forty minutes to take up all the bottom coal in such room, then the loader shall be paid at the rate of 30 cents per hour for such time so required in excess of forty minutes. This is to apply to the No. 4 vein of Linton coal.

GENERAL.

- 1. When the coal is paid for mine-run, it shall be mined in as good condition as when paid for on the screened lump basis, and, when loaded on the miner's car, it shall, as nearly as possible, be free from slate, bone coal, or other impurities, and, if it can be shown that any miner persistently violates the letter or spirit of this clause, he shall be discharged. Persistently, as used in this clause, means three cars the first week and two cars in any succeeding week. Nor shall he load an undue proportion of fine coal in any one car, but shall see that the fine coal is mixed with the large coal in such a way as to make a fair quality of minerun coal. This provision for cleaning coal and penalty for failure also applies to screened lump coal.
- 2. The semi-monthly pay shall continue until the constitutionality of the law providing for weekly pay shall have been passed upon by the Supreme courts of Indiana and of the United States.
- 3. The time for beginning work in the morning and the length of intermission at noon shall be considered a local question.
- 4. That the above scale is based upon an eight-hour work day; that it is definitely understood that this shall mean eight hours' work at the face, exclusive of the noon time, six days in the week or 48 hours in the week, and that no local ruling shall in any way deviate from this agreement, or impose conditions affecting the same, but any class of day labor may be paid at the option of the operator for the number of hours and fraction thereof actually worked at the hour rate, based on one-eighth of the scale rate per day. Provided, that when men go into the mine in the morning, they shall be entitled to two hours' pay whether the mine works or not, excepting in event of a mine being closed down by action of any member or members of the U. M. W. of A., the two hours' pay shall be forfeited.

REGARDING DRIVERS.

They shall take their mules to and from the stables, and the time required in so doing shall not include any part of the day's labor, their work beginning when they reach the change at which they receive empty cars, but in no case shall a driver's time be docked while he is waiting for such cars at the point named.

- 5. Inside day work may be done upon idle days, and in case of emergency on overtime.
- 6. It is agreed that if any difference arises between the operators and the miners at any time, a settlement shall be arrived at without stopping the work. If the parties immediately affected can not reach an agreement themselves, the question shall be referred without delay to a board of arbitration consisting of two operators, selected by the operator interested, and two miners, selected by the local union of the United Mine Workers of America involved. In the event of these four being unable to reach a decision, they shall select a fifth man, and the decision of the board so constituted shall be final, but no miner or operator directly interested in the differences shall be a member of such board.

Nothing in the above shall be construed as excluding officers of the miners' or operators' associations, nor mine superintendents.

- 7. The duties of the mine committee shall be confined to the adjustment of disputes between the mine boss or superintendent and any of the members of the United Mine Workers of America, working in and around the mines, except as hereinafter set forth in Article No. 16. In case they fail to agree, they shall proceed to adjust the trouble by the selection of an arbitration board as provided in Article 6 of this agreement. The mine committee shall have no other authority, nor exercise any other control, nor in any way interfere with the operation of the mine, and, for violation of this agreement, the committee or any member thereof or mine boss or superintendent shall be discharged.
- 8. That under no circumstances will the operator recognize or treat with a mine committee or any representative of the United Mine Workers of America, during the suspension of work, contrary to this agreement.
- 9. The operator shall have the privilege of working a night shift for cutting coal with machine. All men so employed shall be paid 28 cents extra for each hours' work at night, in addition to the scale price per ton.
- 10. Work on driving entries and drawing pillars may be by double shift, at the option of the operator.
- 11. This contract shall in no case be set aside because of any rules of any local union of the U. M. W. of A. Nor shall there be any rules made controlling or affecting the operations of the mines nor shall any change be made in accepted rules without the operators and miners first consulting and agreeing thereto.
- 12. Coal may be dumped as slowly as the operator may find necessary to thoroughly screen it, even if the car is brought to a stop, but it shall not be dumped in such a way as to throw the coal over the car door or unnecessarily break it.

- 13. Any miner knowing his place to be unsafe, shall protect same without delay and shall go into the mine for that purpose outside of regular hours and on idle days.
- 14. No restrictions shall be placed on the amount of coal which machines may mine, nor on the number of cars that any miner may load in any specified time.

Men shall work double in wide entries at option of operator in developing the mine or for running entries for purpose of increasing production.

Enough extra loaders shall be employed in each mine so that the full complement of loaders agreed upon to follow each machine shall be at work every day that the mine hoists coal.

Where three places are now given to two loaders the custom shall continue.

No more than three places for two men nor two places for one man shall be allowed. In mines where the coal averages 6 feet high or over, rooms 30 feet wide or over equipped with two tracks shall be considered double places, and two loaders may be limited to two such places.

In Sullivan county where men work double in two rooms 25 to 30 feet wide with track up the center, the custom shall continue.

Whenever a new mine is opened it shall be governed by the same rules existing in other contiguous mines in the same vein of coal.

- 15. The price of powder per keg shall be \$1.75. The miners agree to purchase the powder from their operators, provided, it is furnished of standard grade and quality, that to be determined by the operators and expert miners jointly where there is a difference.
- 16. Engineers shall be paid the present rate of wages, thus 12½ per cent. advance. Eight hours shall constitute a day's work. But the engineers shall outside of regular hours, holst and lower the men, and in addition shall perform all the duties which necessarily and usually pertain and belong to an engineer's position, and shall not receive any extra pay therefor. It is agreed further that no hoisting engineer shall be subjected to the interference or dictates of the mine committee nor the local unions, but all the differences between the engineer and his employer shall be adjusted by the officers of the U. M. W. of A. and employer interested.
- 17. The prices now paid firemen and blacksmiths, together with present condition of employment and hours of labor, shall continue during the existence of this contract, plus 12½ per cent. advance.
- 18. It is further agreed that the operators shall offer no objection to the check-off for the check-weighman and for dues for the U. M. W. of A., provided that no check-off shall be made against any person until he shall have first given his consent in writing to his employer. This applies to all day work as well as miners.

SHOT FIREBS.

Present conditions as to shot firers shall continue until a commission composed of one miner, to be selected by the United Mine Workers of America of District No. 11, one operator, to be selected by the Bitumin-

ous Coal Operators' Association of Indiana, and Professor Robert Thurston of Cornell College, an expert engineer, shall be appointed.

Such commission shall, as soon as possible, examine the so-called dangerous pick mines in the state of Indiana and decide whether or not it is necessary to employ shot firers in any of said mines on account of gas, dust or other causes beyond the control of either miners or operators, the present methods of mining not to be considered as being beyond control.

If a majority of such commission shall decide that it is necessary that shot firers be employed in any mine and shall sign a report to that effect, then shot firers may be employed by the miners in such mine, who shall pay them for their services, and such shot firers shall be wholly in the employ of the miners and in no manner whatever to be the agents, servants or employes of the owners, operators or managers of the mine.

The owner or operator of any mine where the commission decides that it is necessary that shot firers be employed and where they are so employed by the miners, shall pay to the local union an amount of money equivalent to one-fourth cent (4/4 cent) per ton of mine-run or two-fifths (% cents) per ton of screened lump of the output of said mine.

It being agreed and understood that such payment to the local union shall not directly or indirectly be considered as or construed to be a payment by the owner or operator of any part or portion of the services rendered by shot firers for the miners.

It being further expressly agreed and understood that in any mine where shot firers are employed that the relation of master and servant shall exist wholly between the miners and the shot firers and that such relation shall not obtain as between the owner or operator of the mine and the shot firers.

The expenses of such commission shall be borne equally by the United Mine Workers of America of District No. 11, and the Bituminous Coal Operators' Association of Indiana, except that the Operators' Association shall alone bear the expenses occasioned by the appointment and services of the expert engineer.

In behalf of the Indiana Bituminous Coal Operators' Association:

J. C. KOLSEM, President.

P. H. PENNA, Secretary.

United Mine Workers of America, District No. 11:

GEO. HARGROVE, President.

J. H. KENNEDY, Secretary.

BRAZIL AGREEMENT.

CONTRACT.

PICK MINING SCALE FOR 1903.

Contract between the Operators, Miners and Day Laborers of the Brazil Block Coal District from April 1st, 1903, to April 1st, 1904:

- 1. Entered into this first day of April, 1903, between the Operators' Scale Committee of the Block Coal District and the Executive Board of the United Mine Workers of America, representing District No. 8.
- 2. Pursuant to a contract made between the Coal Operators and United Mine Workers of America, of Indiana, Illinois, Ohio and Pennsylvania, made at Indianapolis, Ind., February 7, 1903.
- 3. The price for mining screened block coal in the Block Coal District of Indiana shall be one (\$1) dollar per ton of 2,000 lbs., it being understood also that the price for digging unscreened coal shall be an equivalent of the price paid for screened coal.
- 4. That further details in the scale of prices for pick mining in the Block Coal district shall be as follows:
 - 5. The payment for low coal shall be upon the following scale:
- 6. For all coal two feet ten inches and under three feet one inch, one dollar and five (\$1.05) cents.
- 7. For all coal under two feet ten inches one dollar and ten cents (\$1.10).
 - 8. The price of yardage shall be as follows:

Single yardage in coal 3 ft. 1 in. or over	\$1	00 .
Double yardage in coal 3 ft. 1 in. or over	2	0Ó
Gob entries in coal 3 ft. 1 in. or over	1	50
Gob entries in coal 3 ft. 1 in. or over, without brushing		50
Single yardage in coal 2 ft. 10 in. and under 3 ft. 1 in	1	05
Double yardage in coal 2 ft. 10 in. and under 3 ft. 1 in	2	10
Gob entries in coal 2 ft. 10 in. and under 3 ft. 1 in	1	$57\frac{1}{2}$
Gob entries in coal 2 ft. 10 in. and under 3 ft. 1 in. with-		
out brushing		$52\frac{1}{2}$
Single yardage in coal below 2 ft. 10 in	1	10
Double yardage in coal below 2 ft. 10 in	2	20
Gob entries in coal below 2 ft. 10 in	1	65
Gob entries in coal below 2 ft. 10 in. without brushing		55

All entries to be driven when required by the operator, 5½ feet in the clear in height, and the miners agree to gob the dirt, when he is not required to take it more than the distance of six rooms back from the last break through, and when the dirt is hauled by a mule, then the miners agree to unload the same at a distance of not more than eight rooms back from the last break through from the face of the entry. This agreement shall apply to all the block coal mines in the Block Coal District, with the exception of the Present No. 1 and No. 2 Superior mines of the Zeller & McClellan Company, and in these two mines the same conditions shall continue as were in force during the year just ending, viz.. The miners shall continue to gob the break throughs. Twenty-five

cents per yard shall be paid extra for all double yardage when the same is worked double shift, and 12½ cents per yard for all single yardage when same is worked double shift. Work on driving entries and drawing pillars may be double shift at the option of the operator.

It is further agreed that the McIntosh & Co. mine will submit to an investigation relative to the time that the companies commenced gobbing the dirt, and that said company will abide by the decision of the joint board relative to the operators' right to have the dirt gobbed at these mines.

9. Inside day scale:

Track layers \$2	5 6
Track layers' helpers 2	5 6
Trappers 1	13
Bottom cagers 5;	26
Drivers 2	56
Trip riders 2	56
Water haulers 2	56
Timbermen, where such are employed 2	56
Pipe men, for compressed air plants 2	50
All other inside day labor 2	56
Blacksmiths 2	85
All outside day labor shall receive 12½ per cent, advance.	

10. The firemen and night pumpers shall be paid at the rate of twenty-four (24) cents per hour for their labor. The above wage is based on an eight (8) hour work day, but in the event the operator desires it, the firemen and night pumpers are to work overtime to the extent of not more than two hours in any one day or shift.

However, it is understood that in the event of an emergency, the firemen and night pumpers will not limit their time but continue working until such emergency is past.

- 11. Where a miner is working a deficient place, and is being paid by the day, his pay shall be \$2.60 per day, and if he uses his own tools during such time, he shall be paid 10 cents per day for the use of same. The operator shall have the option of furnishing the tools for any such work.
 - 12. The price of blacksmithing shall be 11/2 cents on the dollar.
- 13. Semi-monthly pay shall continue until the constitutionality of the law providing for weekly pay shall have been passed upon by the Supreme courts of Indiana and of the United States.
- 14. The miner shall not be compelled to load his coal more than six feet from the face at beginning time.
- 15. Inside day work may be done upon idle days, and in case of emergency on overtime.
- 16. The hour to begin work in the morning shall be seven (7) a. m., with thirty minutes' stop for dinner, and begin shooting at 3:30 o'clock p. m., from April 1, 1903, to October 1, 1903, and from October 1, 1903, to April 1, 1904, the mines shall start at seven-thirty a. m., with thirty minutes' stop for dinner, and begin shooting at 4:00 p. m., and that no shooting shall be done at the mine except by mutual consent between the bank boss and the bank committee, and in the event that the mine is to work

a half day it shall be the duty of the mine boss to notify the bank committee of the fact.

- 17. That eight hours a day means eight hours' work in the mine at the usual working places for all classes of inside workmen. This shall be exclusive of the time required in reaching said working places in the morning and departing from the same at night.
- 18. The miners hereby agree to do all the propping in their rooms, except setting of props required to break the bottom in shooting the same, and if any props are loosened or displaced, thereby endangering the safety of the workmen, the miners agree to reset the same.
- 19. It is also agreed on the part of the operators not to require the miners to put down their own road, and bottom shooters may lay the road in the rooms when required.
- 20. Also to give each miner as near as possible an equal turn of cars, and not to allow any day hands to load coal on idle days.
- 21. No miner shall be discharged or discriminated against because of his refusal to do work by the day when called upon by the pit boss.
- 22. It is also agreed not to require miners to load or clean falls unless they are caused by some fault of the miner not properly timbering his working place, or his having shot or otherwise caused his timber to become insecure, in which case it will be the duty of the miner to put his place in good order again.
- 23. It is further agreed that if any differences arise between the operator and miner at any pit, settlement shall be arrived at without stopping of work. If the parties immediately affected can not reach an adjustment between themselves, the question shall be referred to the Executive Board of the United Mine Workers of America, representing District No. 8, and an equal number of operators, whose actions shall be final, but no miner nor operator interested in the differences shall be a member of said committee.
- 24. The duties of the mine committee shall be confined to the adjustment of disputes between the mine boss or superintendent and any of the members of the United Mine Workers of America, working in and around the mines.
- 25. Regarding drivers: They shall take their mules to and from the stables, and the time required in so doing shall not include any part of the day's labor. Their work beginning when they reach the parting at which they receive empty cars, and in no case shall the driver's time be docked while he is waiting for said cars at the point named, but when the men go into the mine in the morning they shall be entitled to two hours' pay, whether or not the mine works the two full hours, but after the first two hours, the men shall be paid for every hour thereafter by the hour, or for each hour's work or fractional part thereof. If for any reason the regular routine of work can not be furnished inside labor for a portion of the first two hours, the operators may furnish other than the regular labor for the unexpired time.
- 26. That under no circumstances will the operators recognize or treat with a mine committee or any representative of the United Mine Workers of America, during the suspension of work, contrary to this agreement.
- 27. The Block Coal District of Indiana may continue the use of the diamond bar screen, the screen to be seventy-two (72) feet superficial area,

of uniform size, one and one-quarter (1½) inches between the bars, free from obstructions, and that such screen shall rest upon a sufficient number of bearings to hold the bars in proper position.

- 28. It is hereby further agreed that track layers may begin work on top before the usual time of hoisting coal in getting track material ready to send down on the cage, and that the time required in doing so shall be a part of the eight hours' work.
- 29. In case of emergency work, the mine boss shall consult with the mine committee, and if they approve of the work being done on overtime, the men engaged thereon shall not be required to lay off until their time is equalized with the others working in the said mine.
- 30. The Crawford Coal Company in their mines at Center Point may continue to do the brushing in the entries where the coal is 3 feet 1 inch and under in thickness.
- 31. This contract is entered into in good faith by both parties, and there is to be no deviation from it by the operators, miners, laborers or any local union.

Committee on behalf of the Operators for the Block Coal District:

JAS. H. McCLELLAND, WM. M. ZELLER, W. E. EPPERT, JAMES T. ANDREW, A. H. ZIMMERMAN.

Executive Committee District No. 8, United Mine
Workers of America, for Block Coal Miners:

JAMES CANTWELL, WILLIAM HUSTON, WM. TREAGER, WILLIAM WILSON.

CONTRACT.

MACHINE MINING SCALE FOR 1903.

Contract between the Machine Operators of the Block Coal District and the Executive Board District No. 8, United Mine Workers of America, governing prices and conditions of mining in Machine Mines Block Coal District:

- 1. Entered into this first day of April, 1903, between the Operators' Machine Mines of the Block Coal District, and the Executive Board of the United Mine Workers of America representing District No. 8.
- 2. Pursuant to a contract made between the Coal Operators and the United Mine Workers of America of Illinois, Indiana, Ohio and Pennsylvania, made at Indianapolis, Ind., February 7th, 1903.
- 3. The price for loading, shooting, timbering, taking care of all draw slate that is four (4) inches and under in thickness, in rooms and entries, shall be fifty-three and one-half $(53\frac{1}{2})$ cents per ton.

Price for entry driving, 6 to 9 ft. wide, fifty-three and one-half (53½) cents per yard.

Price for entry driving, 9 to 12 ft. wide, thirty-two and one-half (321/2) cents per yard.

The loader agrees to keep the bug dust and draw slate back 14 ft. from the working face.

All entries more than 12 feet in width shall be paid same as rooms.

Machine Runners and Helpers to be paid twenty-five (25) cents per ton, and when working by the day, machine runners to be paid \$3.03\%4 per day. Helpers, \$2.70 per day. Motormen receive 12\%2 per cent. increase on present wages.

Entry driving, 6 to 9 ft. wide, Machine Runner to be paid 25 cents per yard.

Entry driving, 9 to 12 ft. wide, Machine Runner to be paid 16 cents per yard.

It is further agreed that where there is not sufficient room to gob the bug dust and draw slate, the loader will load it in the bank cars and the company will unload it.

It is understood that there shall be nothing paid for room turning or low coal, and there shall be nothing charged for blacksmithing.

There shall be no discrimination against any employes.

That the system of loading coal in machine mines be on the following basis, to wit:

- 1. That one man shall have the right to two places where he can take care of same.
- 2. That two men shall have the right to three places where they can take care of same.
 - 3. All others one place.

When a man is off work more than one day, the mine boss shall have the right to put a man in the places if it is necessary, providing the man leaves the places in the same condition as near as possible as he found them.

The Block Coal District of Indiana may continue the use of the diamond bar screen, the screen to be seventy-two (72) feet superficial area, of uniform size, one and one-quarter (1½) inches between bars, free from obstructions, and that such screen shall rest upon a sufficient number of bearings to hold the bars in proper position.

This agreement to become a part of 'the agreement entered into on the 1st day of April, 1903, between the Operators' Scale Committee of the Block Coal District, and the Executive Board of the United Mine Workers of America, representing District No. 8.

On behalf of the Machine Operators of the Block Coal District:

BRAZIL BLOCK COAL CO.,
JAS. H. McCLELLAND, President.

DIAMOND BLOCK COAL CO.,
JAS. H. McCLELLAND, President.

On behalf of the Executive Board District No. 8,

United Mine Workers of America:

JAS. CANTWELL, WILLIAM HUSTON, WM. TREAGER, WILLIAM WILSON, HARRY WRIGHT,

Members M. E. B.

CONTRACT

BETWEEN THE NATIONAL BROTHERHOOD OF COAL HOISTING ENGINEERS AND OPERATORS OF DISTRICT NO. 8, SIGNED MARCH 21, 1903.

- 1. On and after April 1, 1903, until April 1, 1904, the scale of Hoisting Engineers throughout the Block Coal District, or District No. 8, shall be as follows: Where one Engineer is employed, the compensation shall be eighty-four dollars and thirty-seven cents (\$84.37) per month. Where two Engineers are required, the first Engineer shall receive eighty-four dollars and thirty-seven cents (\$84.37) per month, the second seventy-three dollars and twelve cents (\$73.12) per month, and when they change week about seventy-eight dollars and seventy-five cents (\$78.75) per month.
- 2. It is agreed on the part of the Engineers to be at their work in time to lower the men and mules, and remain a sufficient time after the regular working hour to hoist the men and mules from the mine. Also to keep up all repairs on the machinery, including pumps in the mine.
- 3. It is also mutually agreed that a licensed Engineer shall be employed at all times when steam is required at the throttle. Provided, however, that in all cases where the mine is not hoisting coal, or the machines are not operated, then, and in all such cases, the Engineers are required to do their own firing, it being understood that this provision does not apply to any case where the work of the mine may be stopped in the midst of any one shift. Nor does it cover any case where the fireman is required to assist in the washing or cleaning out the boilers on Sunday.
- 4. It is also fully understood and agreed upon the part of the Brother-hood of Hoisting Engineers that they will not under any circumstances allow affiliation with any other labor organization to interfere with or prevent their being on duty at any and all times required by the operators, and that they will not suspend work in sympathy with any other organization; and further that they will during the continuance of this contract at all times fully protect all the company's property under their care, and that they will operate fans and pumps, and lower and hoist such men or supplies as may be required to protect the company's property, and any and all coal that may be required to keep up the steam at the company's plant. But it is understood that the operators will not ask them during this period to hoist any coal produced by nonunion labor for sale on the market.
- 5. It is also agreed that only members of the National Brotherhood of Coal Hoisting Engineers shall be employed in the capacity of hoisting engineers during the continuance of this agreement, when such members, competent to fill the position, can be obtained.
- 6. No Engineer shall lay off or exchange shifts without the consent of the operators.
- 7. It is also agreed that in case of sickness or unexpected absence of the engineer any other engineer or engineers shall perform his duty; and if desired by them his wages for time so absent shall revert to the engineer performing such duty.

- 8. It is also agreed that in case of dispute or trouble arising between any Engineer and the Operator by whom he is employed, work shall not be suspended, but the grievance shall be taken up by the proper officials.
- 9. It is also agreed upon the part of the operators that they will enforce a rule forbidding the entering of the engine-room by loafers and disinterested parties and that they will have cards printed and placed in conspicuous places to this effect.

Signed and agreed to by Operators' Committee:

JAS. H. McCLELLAND, WM. M. ZELLER, A. H. ZIMMERMAN, M. H. JOHNSON.

Engineers' Committee:

LUTHER PULLEN,
ALBERT HIXON.
T. E. JENKINS,
D. H. COLLIER,
W. C. BIGGINS.
FRANK YOCKUM.

TABLE

Showing by Counties the Name of Mine, Number of Tons Screened, Slack and Nut and Mine Run Coal, Total Tons of All Grades of Coal Produced, and the Distribution Thereof; the Production of Block and Bituminous Coal, Each Being Shown Separately, as is the Machine and Pick or Hand Mined Coal.

BLOCK COAL MACHINE MINES.

CLAY COUNTY.

		MACHIN	R MINED.			Pick I	MINED.		DISTRI	BUTION.		Wagre	PAID.	
NAME OF MINE.	Tons of Screened Coal.	Tons of Slack and Nut.	Tons of Mine-Run.	Total Tons of all Kinds of Coal Produced.	Tons of Screened Coal.	Tons of Slack and Nut.	Tons of Mine- Run.	Total Tons of all Kinds of Coal Produced.	Indiana.	Other States.	To Miners.	To Inside Day Men.	To Outside Day Men.	Total Wages.
Brazil Block No. 1 Brazil Block No. 8 Brazil Block No. 10 Brazil Block No. 11 Diamond No. 5 Rob Roy	36,604	2,015 5,850 4,575 280 7,405 ported.		12,094 35,110 27,447 1,673 44,009	12,764 9,203 11,794 12,580 9,068	2,555 1,850 2,370 2,505 1,865		15,319 11,053 14,164 15,085 10,933	15,886 4,377 4,902 1,801 11,346	11,527 41,786 36,709 14,957 43,596	\$21,171 39 31,891 60 31,510 27 14,546 73 41,459 74	\$19,924 53 29,603 81 16,954 78 6,881 84 23,313 57	\$7,283 74 9,731 96 6,999 04 3,607 05 8,812 27	\$48,379 66 71,227 37 55,464 09 25,035 62 73,585 58
Total	100,208	20,125		120,333	55,409	11,145		66,554	38,312	148,575	\$140, 579 73	\$96,678 53	\$ 36, 4 34 06	\$ 273,69 2 32
						PA	RKE CO	UNTY.				•		
Brazil Block No.12 Mary	46,115 10,082	9,760 1,140		55,875 11,222	9,965 26,062	2,274 5,405		12,239 31,467	9,179 2,94 4	58,935 39,745	\$46,279 21 39,589 80	\$40,430 62 14,941 82	\$11,308 99 8,062 21	\$98,018 8 2 62,593 8 3
Total	56,197	10,900		67,097	36,027	7,679		43,706	12,123	98,680	\$85,869 01	\$ 55,372 44	\$ 19,371 20	\$160,612 6 5
Total Machine Block	156,405	31,025		187,430	91,436	18,824		110,260	50,435	247,255	\$226,448 74	\$152,050 97	\$ 55,805 2 6	\$434,304 97

BITUMINOUS MACHINE MINES.

CLAY COUNTY. .

Gifford No. 1 Gifford No. 2	18,483 32,157	9,47 5 2,915	 27,958 35,072	17,682 61,528	3,450 28,268	 21,132 89,796	14,884 35,072	34,206 89,796	\$29,471 56 82,115 27	\$17,347 10 42,607 14	\$6,788 33 10,126 32	\$53,606 99 134,848 73
Total	50,640	12,390	 63,030	79,210	31,718	 110,928	49,956	124,002	\$111,586 83	\$59,954 24	\$16,914 65	\$188,455 72

GREENE COUNTY.

Black Creek Island City No. 1 Island City No. 2 Gilmour Hoosier No. 1 Midland Summit No. 2 Glenburn Antioch Tower Hill Green Valley Lattis Creek No. 1	58,246 37,402 26,816	18,226 12,602 2,283 21,518 9,769 13,873 2,068 12,913 24,343 27,719	29,030 67,149 62,797 136,024 14,155 20,421 100,460 58,526 25,644 1,503 35,162 36,633	80,111 67,149 110,774 136,024 20,925 100,185 147,631 99,215 31,732 46,378 86,386 108,961	2,640 11,151 13,913 10,108	16,036 6,027 837 6,249 6,636 4,019	26,496 48,228 32,142 2,065 17,165 5,284 704	72,010 48,228 55,583 5,542 34,565 25,833 14,881	75,116 48,228 55,583 85,403 19,402 73,613 71,118 107,263 41,533 37,891 39,071 62,323	76,905 67,149 110,774 50,181 1,523 32,114 76,513 26,517 16,032 23,318 47,315 46,695	\$80,168 03 58,850 96 91,062 50 72,995 22 7,254 56 42,205 81 65,255 61 77,681 73 35,653 77 30,127 95 45,154 35 60,289 94	\$30,372 10 28,392 31 30,499 74 23,953 00 9,445 47 12,954 39 27,949 77 25,994 07 16,745 25 15,451 81 19,877 70 28,547 39	\$9,113 00 10,495 13 18,288 36 8,694 28 2,922 71 19,307 61 16,754 63 8,712 04 8,339 99 7,542 73 10,205 20 16,354 70	\$119,653 13 97,738 40 139,850 60 105,642 50 19,622 74 81,467 81 110,060 01 112,387 84 60,739 01 53,122 49 75,237 25 106,192 03
Atlas No. 1	8,337 10,369	12,815 4,592 5,173 834 168,728	54,326 3,364 17,798 528 4,892 668,412	75,478 18,325 26,177 2,615 4,892 1,162,958	3,873 238 3,092 91,951	741 1,236 41,781	14,214 1,646 5,429 402 115 153,903	18,087 1,646 6,408 4,730 115 287,635	76,417 12,038 21,694 4,730 5,007	17,148 7,933 10,891 2,615 613,723	54,879 32 15,020 72 14,968 13 3,452 65 4,057 69 \$766,178 94	15,664 50 9,523 17 11,654 99 2,989 50 2,572 67 \$312,587 83	14.535 33 14,144 40 7,799 80 1,690 65 3,809 68 \$178,710 24	85,079 15 38,688 29 34,422 92 8,132 80 10,440 04 \$1,257,477 01

PARKE COUNTY.

Lyford No. 1 Parke No. 11	7,560	3,138	11,382 25,749	22,080 25,749	 	16,974 24,864	16,974 24,864	6,492 46,399	32,562 4,214	\$16,355 88 27,852 12	\$14,017 64 7,969 02	5,336 76 4,587 06	35,710 28 40,408 20
Total	7,560	3,138	37,131	47,829	 	41,838	41,838	52,891	36,776	\$44,208 00	\$21,986 66	\$9,923 82	\$76,118 48

BITUMINOUS MACHINE MINES-Continued.

SULLIVAN COUNTY.

,		MACHIN	MINED.			Pior 1	Minro.		DISTRIBUTION.		WAGES PAID.				
NAME OF MINE.	Tons of Screened Coal.	Tons of Slack and Nut.	Tons of Mine- Run.	Total Tons of all Kinds of Coal Produced.	Tons of Screened Coal.	Tone of Slack and Nut.	Tons of Mine- Run.	Total Tons of all Kinds of Coal Produced.	Indiana,	Other States.	To Miners.	To Inside Day Men:	To Outside Day Men.	Total Wages.	
Bunker Hill Caledonia Dugger Green Hill Hymers No. 1. Jackson Hill No. 2. Phoenix No. 3 Phoenix No. 5 Shelburn Star City Sun Flower Glendora Hymers No. 2 Wilfred No. 1 Little Giant Cummins Mildred West Linton Total	60,719 89,071 10,288 62,606 103,717 76,901 61,611 79,894 Tonna		5,019 4,342 31,703 50,591 42,683 128,036 17,416 1,763 49,663 44,356 16,079 12,000 12,0	28,863 36,966 68,410 40,246 156,392 196,415 128,036 17,416 15,834 105,739 139,832 162,770 130,846 4 2,000 1,745 280	16,912 15,691 2,836 1,584 2,054 21,877	7,745 5,282 778 646 1,253 11,079		25,840 28,077 5,689 2,230 3,334 35,499 15 1,300 546 102,530	8,710 19,524 41,402 80,401 67,470 9,000 9,955 30,986 32,815 58,714 24,061 44,020 2,000 1,745 826	54,703 56,323 54,575 41,950 114,990 116,014 60,566 8,416 9,213 110,222 107,032 104,994 128,709 86,828	\$34,702 86 35,502 95 36,879 80 20,399 81 71,948 53 81,851 79 65,321 65 10,093 00 10,707 82 77,638 61 79,638 61 79,638 10 69,301 10 64,755 76 2,500 00 851 35 530 51 \$723,827 40	\$18,918 00 18,434 61 27,756 73 17,576 83 28,578 04 35,046 12 24,486 53 3,839 00 8,136 90 32,231 43 7,143 90 35,571 10 21,928 55 27,576 38 1,562 90 1,062 90 370 00	\$7,993 68 9,867 56 9,366 32 6,509 79 10,932 08 12,933 19 1,143 00 5,997 35 16,391 48 13,518 90 18,446 95 12,470 77 23,329 61 1,045 00 1,047 00 1,045 00 1,045 00 1,045 05 986 01	\$61,614 54 63,805 12 74,002 85 44,486 91 115,260 91 127,329 99 102,111 37 15,075 00 28,841 47 116,241 33 91,896 44 103,700 42 115,661 75 5,045 00 2,951 75 1,886 52	

VIGO COUNTY.

Atherton		13,536 1,567 19,969	165,115 100,711	39,713 3,920 165,115 146,988	12,155 50,925	9,217 25,278	166 21,156 4,938	21,538 97,359 4,938	573 97,359 120,865	60,678 3,920 170,053 26,123	\$30,773 76 65,561 70 83,897 72 70,062 10	\$7,115 59 17,471 80 45,967 59 25,861 07	\$6,291 57 7,588 20 15,853 31 12,447 12	\$44,180 92 90,621 70 145,718 62 108,370 29
Total	54,437	35,072	266,227	355,736	63,080	34,495	26,260	123,835	218,797	260,774	\$250,295 28	\$96,416 05	\$ 42,180 20	\$388,891 53

WARRICK COUNTY.

Big Four Big Vein No. 3 Electric	8,005	3,686	96,231 74,003 19,622	96,231 74,003 31,313		· · · · · · · · · · · · · · · · · · ·	 	50,309 74,003 10,160	45,922 21,153	\$42,117 47 36,615 55 13,931 39	\$8,256 84 6,049 90 4,186 22	\$5,770 27 5,180 75 2,774 54	\$56,144 58 47,846 20 20,892 15
Total	8,005	3,686	189,856	201,547			 	134,472	67,075	\$92,664 41	\$18,492 96	\$ 13,725 56	\$124,882 93
Total Bituminous Machine Mined Coal Total Machine Mined Block Coal Total Machine Mined		31,025	<u>-</u>	3,216,648 187,430 3,404,078	294,695 91,436 386,131	18,824	 666,766 110,260 777,026	50,435	2,158,219 247,255 2,405,474	226,448 74	152,050 97	55,805 26	\$3,235,883 02 434,304 97 \$3,670,187 99

BLOCK COAL—HAND OR PICK MINES.

CLAY COUNTY.

		Produ	OTION.		DISTRIE	ution.		₩AG	ES.	
NAME OF MINE.	Tons of Screen- ed Coal.	Tons of Slack and Nut Coal.	Tons of Mine- Run Coal.	Total Tons of all Kinds of Coal Produced.	Indiana.	Other States.	To Miners.	To Inside Day Men.	To Outside Day Men.	Total Wages Paid.
Continental No. 1. Gart No. 5. Gart No. 7. Rebstock Lawrence No. 6. Lawrence No. 7. Cornwell Crawford No. 2. Crawford No. 3. Crawford No. 6. Crawford No. 7. Eureks No. 2. Eureks No. 3. Pratt Monarch Rob Roy Crawford No. 3.	6,991	1,685 745 5,630 500 10,700 11,768 6,136 8,095 2,430 6,445 7,919 100 1,477 1,515	1,421 765 263 601 672 9,244 9,312	8,642 4,499 33,705 2,565 56,263 59,948 37,750 38,351 15,908 27,279 41,308 957 15,553 9,178 9,244	2,794 19,581 740 32,222 34,130 37,750 18,645 6,240 13,453 22,171 275 4,752 9,107 9,244	8,642 1,705 14,124 1,825 24,041 25,818 19,706 9,668 13,826 19,137 682 10,801 71	\$9,402 57 3,915 25 38,425 40 3,006 64 46,835 91 58,431 66 33,219 43 30,674 59 13,122 18 25,148 99 35,388 20 7,084 30 See note	\$3,609 03 887 67 13,019 03 1,016 99 9,422 13 18,986 08 10,549 91 7,008 83 2,752 05 5,896 25 10,623 59 6,414 15 3,065 45 13,262 29	\$2,018 99 909 76 6,916 68 1,204 52 5,894 36 10,511 33 4,442 27 4,732 97 1,835 84 3,688 81 5,912 39 525 25 5,309 25 5,309 25 1,532 60 2,168 35	\$15,030 59 5,712 68 58,361 11 5,228 11 62,152 40 87,929 24 48,211 61 42,416 39 17,770 07 34,734 05 51,924 00 2,021 85 24,439 30 11,682 35 15,430 64
Total	305,687	71,529	22,278	399,494	231,314	168,180	8 352,782 26	\$ 116,194 98	\$ 62,749 9 5	\$ 531,727 1

PARKE COUNTY.

Jrawford No. 10 3 uperior No. 1. 3 uperior No. 2 3 uperior No. 3 Pan American Brazil Block No. 9	13,368 69,295 48,917 35,158 68,807 38,580	1,985 16,930 11,980 8,605 10,545 7,720	160 773 933	15,353 86,385 61,670 43,763 75,285 46,300	994 21,330 25,130 12,178 24,850 5,267	14,359 65,055 36,540 31,585 50,435 41,033	\$13,055 52 74,317 47 52,403 98 43,922 53 73,506 30 44,243 04	\$4,138 91 18,214 79 21,063 31 10,281 84 21,936 20 15,512 39	\$2,235 23 10,396 46 11,596 45 5,757 91 7,614 20 6,707 30	\$19,429 66 102,928 72 85,063 74 59,962 28 103,056 70 66,462 73
Total	269,125	57,76 5	1,866	328,756	89,749	239,007	\$301,448 84	\$91,147 44	\$44,307 55	\$436,903 83
Total Pick Mined	574,812	129,294	24,144	728,250	321,063	407,187	\$654,231 10	\$207,342 42	\$ 107,057 50	\$968,631 02

BITUMINOUS PICK MINES.

CLAY COUNTY.

Cloverland No 1 Fair View Fortner Klondyke Glen. Pearl Silverwood. Cloverland No 2 Lewis	1,626 15,652 40,221 46,183 58,471 16,149 7,743	6,725 19,852 12,805 36,269 9,910 2,540	33,480 5,762 18,069 2,122 2,446	158,041 3,175 28,139 78,142 58,988 96,862 26,059 10,283 2,446	85,613 1,707 21,258 72,968 21,050 57,832 14,499 1,700 312	72,428 1,468 6,886 5,174 37,938 39,030 11,560 8,583 2,134	\$104,755 58 2,223 16 18,583 46 45,660 45 47,381 75 56,745 24 16,645 60 11,659 00 1,100 00	\$26,\$13 30 1,033 65 4,224 10 12,317 97 9,355 35 13,796 20 6,362 70 2,754 58 921 19	\$13,334 88 1,062 45 1,961 57 5,790 58 4,600 50 6,251 55 4,125 70 1,216 71 1,455 61	\$144,403 76 4,319 26 24,769 13 63,769 00 61,337 60 76,792 99 27,134 00 15,630 29 3,476 80
Total	277,591	122,665	61,879	462,135	276,934	185,201	\$304,754 24	\$77,079 04	\$ 39,799 55	\$421,632 83

DAVIESS COUNTY.

Cabel No. 4. Cabel No. 9 Montgomery Nos. 2 and 3 Mutual Union Mandabach W heatland	93,008 12,985 175 187	150	18,523 9,942 12,137 8,494 3,250 2,131	4,097 29,424 116,269 26,872 8,494 3,535 2,468	4,097 22,277 75,996 14,850 8,494 3,535 2,363	7,147 40,273 12,022	\$2,978 77 16,918 80 83,383 20 19,776 90 5,319 18 1,636 20 1,400 00	\$854 10 8,554 40 25,268 00 5,000 50 1,590 04 212 34 1,023 75	\$916 75 3,909 95 11,986 64 3,055 00 787 53 185 20 684 87	\$1,749 62 29,383 15 120,637 84 27,832 40 7,696 75 2,033 74 3,108 62
Total		20,288	54,477	1911 59	131,612	59,547	\$131,413 05	\$42,503 13	\$21,525 94	\$195,442 12

BITIUMINOUS PICK MINES-Continued.

FOUNTAIN COUNTY.

	Production.				Distribution.		Wages.				
NAME OF MINE.	Tons of Screen- ed Coal.	Tons of Slack and Nut Coal.	Tons of Mine- Run Coal.	Total Tone of all Kinds of Coal Produced.	Indiana.	Other States.	To Miners.	To Inside Day Men.	To Outside Day	Total Wages Paid.	
Diamond	349 4,070 245	1,4 6 0 90	9,933 175	647 15,463 510	622 15,463 450	25 60	\$367 33 8,661 00	\$285 47 1,461 00 784 90	\$156 10 1,294 00 326 39	\$808 90 11,416 00 1,111 29	
Total	4,664	1,640	10,316	16,620	16,535	85	\$ 9,028 33	\$2, 531 37	\$1,776 49	\$ 13,336 19	
	3		GI E	son cou	JNTY.			,			
Oswald	13,005	13,261	20,434	46,700	40,866	5,834	\$24,854 19	\$ 15,609 54	\$ 10,769 33	\$ 51 ,2 33 06	
Total	13,005	13,261	20,434	46,700	40,866	5,834	\$24,854 19	\$15,609 54	\$ 10,769 33	\$51,233 06	
	-		GR	EENE CO	OUNTY.	,		-			
Island No. 3 Island Valley No. 3 Island Valley No. 2 South Linton Vulcan Templeton	42,528 21,634 33,505 2,756 9,933	21,754 14,264 18,556 1,116 4,410	92,574 63,306 102,712 4,280 99,897	92,574 127,588 35,898 154,773 8,152 114,240	7,574 81,873 21,686 93,763 201 114,240	85,000 45,715 14,212 61,010 7,951	\$54,252 86 74,244 34 19,600 80 93,616 87 5,009 33 65,984 80	\$18,100 55 19,845 46 8,910 92 23,512 01 1,033 50 17,100 55	\$8,432 24 8,100 13 4,850 59 7,786 47 1,511 57 8,256 05	\$80,785 65 102,189 93 33,362 31 124,915 35 7,554 40 91,341 40	

Victoria Fry Island No. 5.	27,810	25,422	169,838 14,464 5,439	223,070 14,464 5,439	210,616 14,464 5,439	12,454	13 2 ,104 88 12,785 82 4,741 10	19,921 67 4,540 53 2,213 45	10,564 60 2,033 35 1,513 94	162,591 15 19,359 70 8,468 49
Total		85,522	552,510	776,198	549,856	226,342	\$462,340 80	\$ 115,178 €4	\$53,048 94	\$ 630,568 38
		-	K	NOX COU	INTY.					
Bicknell Edwardsport Knox Lynn Prospect Hill Enterprise	20,222 22 16,637 3,694 No repo	17,421 75 13,435 2,581 rt	20,838 6,707 20,827 12,486 3,004	58,481 6,804 50,899 12,486 9,279	57,706 6,804 42,590 11,467 9,279	8,309 1,019	\$29,846 92 4,256 94 25,447 49 7,825 60 11,419 97	\$8,530 96 1,171 95 12,352 05 1,556 47 4,506 99	\$6,009 66 797 65 5,381 85 1,570 93 1,916 18	\$44,387 54 6,226 54 43,181 39 10,953 00 17,843 14
Total	40,575	33,512	63,862	137,949	127,846	10,103	\$78,796 92	\$28,118 42	\$15,676 27	\$122,591 61
			PA	RKE CO	U NTY.				· · · · · · · · · · · · · · · · · · ·	
C. B. Harrison W. P. Harrison Cox No. 3 Lucis Mecca No. 1 New Century Minshal No. 1 Briar Hill Minshal No. 2	18,412 21,882 18,768 90,298	7,681 11,411 9,990 18,056	3,971 10,990 97,459 31,050 2,350 7,885 19,930 22,162 103	4,496 10,990 97,459 57,143 35,643 36,643 128,284 22,162 948	4,496 10,990 82,769 37,106 8,154 11,995 128,284 22,162 143	14,690 20,027 27,489 24,648	\$2,323 30 6,011 50 58,106 05 35,442 72 22,700 20 23,053 41 102,016 28 18,194 04 528 42	\$719 50 2,536 40 27,905 35 13,213 73 11,473 69 8,429 62 28,212 82 7,002 48 874 18	\$412 00 1,240 00 10,268 23 7,873 39 6,073 86 4,740 37 11,330 18 3,716 41 471 17	3,454 86 9,787 96 96,279 65 56,529 86 40,247 36,223 46 141,559 28 28,912 95 1,873 77
Total	150,411	47,457	195,900	393,768	306,099	87,669	\$268,375 92	\$100,367 77	\$46,125 61	\$414,86 9 3
	1	<u> </u>	PF	RRY CO	UNTY.					
Troy	27 3	84	10,630 133	10,630 490	10,630 490		\$7,1 39 99 272 7 5	\$1,914 69 155 00	\$1,632 92 100 00	\$10,587 6 527 7
Total	273	84	10,763	11,120	11,120		\$ 7,412 74	\$2,069 69	\$1,632 92	\$11,115 3

BITUMINOUS PICK MINES—Continued.

PIKE COUNTY.

77				<u> </u>	T -					
·		PRODU	CTION.		DISTRI	UTION.		WAC	}es.	
NAME OF MINE.	Tons of Screen- ed Coal.	Tons of Slack and Nut Coal.	Tons of Mine- Run Coal.	Total Tons of all Kinds of Coal Produced.	Indiana.	Other States.	To Miners.	To Inside Day Men.	To Outside Day	Total Wages Paid.
Massey Aberdeen Ayrshire No. 3. Ayrshire No. 4. Ayrshire No. 5. Ayrshire No. 6. Blackburn Hartwell Little's Rogers Petersburg Carbon Winslow	3,117 33,252	2,910 2,450 16,407 11,873 192 port. 791 1,911 45,472 	10,590 14,756 10,809 47,260 5,050 31,248 45,479 22,335 2,670 36,150 8,274 23,019	17,679 20,190 53,174 90,374 5,421 32,668 50,507 101,059 2,670 36,150 12,221 62,115 484,228	16,501 5,853 35,518 53,428 4,176 30,382 42,025 81,936 2,670 33,486 7,917 62,115 376,007	1,178 14,337 17,656 36,946 1,245 2,286 8,482 19,123 2,664 4,304	\$13,687 03 11,719 07 27,854 36 55,862 34 2,848 23 18,316 04 33,016 31 58,344 09 1,375 65 22,754 69 7,542 54 38,724 96	\$4,508 04 4,138 41 14,079 17 15,243 60 1,053 22 7,078 81 12,414 63 17,294 22 638 03 7,176 90 4,035 43 18,048 21	\$2,590 49 2,575 81 7,186 80 7,641 25 790 82 3,768 75 8,035 44 6,782 80 158 36 3,235 75 1,939 88 7,473 86	\$20,785 56 18,433 29 49,120 33 78,747 19 4,692 27 29,163 60 53,466 38 82,421 11 2,170 04 33,167 85 64,247 03
Total	120,206	100,582	257,440	484,228	370,007	100,221	\$292,015 31	\$100,700 67	\$52,180 01	2 449,931 99
			SUL	LIVAN C	OUNTY.			·	· 	
White Ash. Freeman. Island No. 4. Lablenze. Citizens Bruilettes No. 6.	470	1,605 3,640 orted 450	41,232 1,955 2,259 350 1,317	46,477 13,937 2,259 1,270 1,317	30,887 4,390 2,259 1,270	15,590 9,547 1,317	\$28,411 83 10,799 49 400 00 1,054 44 2,248 15	\$8,756 49 2,805 65 205 00 243 20	\$4,874 97 2,996 72 1,336 00 247 70	\$42,043 29 16,601 86 1,941 00 1,545 34 2,248 15
Total	12,452	5,695	47,113	65,260	38,806	26,454	\$42,913 91	\$12,010 34	\$9,4 55 39	864,379 64

VANDERBURGH COUNTY.

Diamond First Avenue Ingleside.	3,236	8,908 2,487 orted	10,066 1,944	32,846 7,667	31,435 6,989	1,411 678	\$20,740 27 5,390, 25	\$4,556 34 1,380 25	\$3,800 53 1,255 90	\$29.097 14 8,026 40
Sunny Side Union Unity	9,006 10,409	16,823 5,216 1,000	27,828 10,409 61,993	53,657 26,034 84,444	21 111	26,581	50,500,10	15,279 49 4,454 55 9,865 05	7,085 09 3,510 40 7,355 90	51,699 64 28,191 55 75,721 05
Total	57,974	34,434	112,240	204,648	175,978	28,670	\$134,192 28	\$ 35,535 68	\$23,007 82	\$ 192 ,7 35 78

VERMILLION COUNTY.

Bruilettes No. 3 Bruilettes No. 4 Bruilettes No. 5 Buckeye Bureka Crown Hill No. 1. Crown Hill No. 2.	52,455 17,302 65,956	10,003 308 30,323 9,572 32,087	96,076 11,848 86,712 16,698 10,007 59,454 5,425	111,603 12,658 169,490 43,572 10,007 157,497 5,425 137,557	16,238 3,178 25,593 10,007 12,498 1,515	95,365 9,480 143,897 43,572 145,000 3,910 137,557	\$58,952 80 6,207 35 99,973 92 25,311 16 7,200 74 89,346 11 2,200 00 79 739 82	\$15,086 25 1,989 55 21,306 15 10,021 37 3,489 66 17,182 00 2,925 33	\$10,070 85 685.30 8,736 20 6,639 50 1,854 39 6,188 00 1,308 87	\$84,109 90 8,882 20 130,016 27 41,972 03 12,544 79 112,716 11 6,434 20
Oak Hill Prince. Willow Grove. Rhoades	. 	6,725 160 110,228	80,364 174,862 81,673 12,283 635,402	137,557 174,862 106,717 12,777 942,165	1,354 4,492 12,283 87,157	137,557 173,508 102,225 494 855,008	79,739 82 97,677 10 65,161 29 7,058 78 \$538,829 07	22,839 97 27,778 08 10,049 19 7,403 66 \$140,071 21	11,380 60 9,625 88 8,695 53 4,362 37 \$69,547 49	113,960 39 135,081 06 83,906 01 18,824 81 \$748,447 77

VIGO COUNTY.

				The same of the sa						
		-			I	11				
Brick Works			6,470	6,470			\$4,071 67	\$1,776 79	\$ 726 92	\$ 6.575 38
Chicago No. 6	24,435	9,762	197	34,394	5,566	28,828	25,528 98	8.123 52	3.561 92	37,214 42
Diamond	54,373	26,080	16,177	96,630	96,630		63,327 05	24.607 80	9.567 75	97,502 60
Peerless	35,177	18,965	6.010	60,152		60.152	41,428 55	14,183 40	7.089 75	62,701 70
Union	30,935	8,345	41.545	80.825	80.825		49.955 15	16.841 90	10,225 30	77,022 35
Ehrlich	14,524	9,236		23,760	22,952	808	13,404 47	5,978 10	3,613 70	22,996 27
Grant No. 2	25,680	29,185	48.578	103.443	16,901	86.542	63,496 28	19.899 55	10,366 84	93,762 67
Hector	28,251	20.154	17,409	65.814	57,672	8,142	39,632 83	14,142 58	7,637 34	61.412 75
Klondyke	29,166	23,530	42,744	95,440	6.482	88,958	47,543 15	15,964 05	6,140 10	69.647 30
Miami No 1	114,706									168.871 54
Nickle Plate	11.877	4.140					15.374 82			23.536.39
Miami No 1	114,706	31,360 4,140	3,494 11,257	149,560 27,274		149,560 27,274	142,253 12 15,374 82	19,324 48 5,600 78	7,293 94 2,560 79	168,871 54 23,536 39

BITUMINOUS PICK MINES-Continued.

VIGO COUNTY-Continued.

,		Produ	CTION.	•	Distri	BUTION.		WA	GES.	
NAME OF MINE.	Tons of Screen- ed Coal.	Tons of Slack and Nut Coal.	Tons of Mine- Bun Coal.	Total Tons of all Kinds of Coal Produced.	Indiana.	Other States.	To Miners.	To Inside Day Men.	To Outside Day	Total Wages Paid.
Ray Redbird. Rosebud No. 2 Royal Ne. 1 Larimer Broadhurst Miami No. 2 Deep Vein Greenfield No. 1 Lost Creek Sugar Creek No. 1 Total	8,062	2,778 12,420 47,533 8,462 8,081 635 7,298 10,115 123 278,202	3,101 25,028 17,838 80,501 12,249 58,652 10,067 10,186 8,496 241	8,873 49,903 151,028 104,242 12,249 74,802 18,884 27,718 36,215 8,496 983	2,957 49,903 132,801 101,445 12,249 45,872 25,460 36,215 1,290 983 702,673	5,916 18,227 2,797 28,930 18,884 2,258 7,206 534,482	\$4,491 82 23,243 98 92,225 80 62,614 37 7,005 83 32,675 63 14,899 47 16,502 34 22,013 05 5,291 15 1,222 51 \$788,262 02	\$945 18 4,557 82 23,210 05 14,442 38 2,594 27 6,009 01 2,281 04 5,053 79 4,612 82 2,093 21 546 51	\$485 35 2,950 16 8,644 95 4,800 15 1,643 74 4,223 43 2,881 59 2,743 87 3,737 30 1,734 59 528 24	\$5,922 35 31,151 46 124,140 80 81,946 90 11,243 84 42,988 07 20,032 10 24,300 00 24,300 00 9,118 95 2,327 26

WARRICK COUNTY.

Air Line Caledonia Chandler Deforrest Star No.1	7,650 5,220	3,810 3,05 5	11,530 13,157 17,315 4,540 33,277	26,070 13,157 28,775 12,815 33,277	8,530 9,232 7,045 12,815 33,277	17,540 3,925 21,730	\$15,896 55 6,957 60 16,368 25 7,118 35 18,020 97	\$2,844 50 1,867 57 5,255 45 1,200 21 5,000 97	\$1,683 94 1,208 95 1,836 45 791 06 3,548 00	\$20,424 99 10,034 12 23,460 15 8,109 62 26,569 94
Total	22,775	11,500	79,819	114,094	70,899	43,195	\$ 64,361 72	\$ 16,168 70	\$9,068 40	\$89,598 82
Total Hand Bituminous	1,679,522	865,070	2,538,607	5,083,199	2,912,388	2,170,811	\$ 3,147,580 50	\$906,138 73	\$4 57,033 88	\$4,510,753 11

		MACHINE	MINED.	,		Pick 1	Mined.		D	ISTRIBUT	ion.		WAGES.	
	Screened.	Slack and Nut.	Mine-Run.	Total.	Screened.	Slack and Nut.	Mine-Run.	Total.	Indiana.	Other States.	Miners.	Inside Day and Monthly Men.	Outside Day and Monthly Men.	Total.
Total production block machine mines Total production block pick mines Total block	156,405	·····			574,812	129,294		·	321,063	407,187	654,231 10	207,342 42	\$55,805 26 107,057 50 \$162,862 76	
Total bituminous machine mines. Total bituminous pick mines	<u></u>		1,558,799	3,216,648	294,695 1,679,522				1		\$1,988,760 86 3,147,580 50			\$3,235,883 02 4,510,753 11
Total machine	1,083,664					999,847	2,775,901	5,749,965	4,637,583	4,329,030	\$5,136,341 36	\$1,725,722 89	\$ 8 84 ,571 88	\$7,746,636 13
mined Total pick mined Grand total		1,147,965	2,800,045						<u> </u>		\$6,017,021 20	\$2,085,116 28	\$1,047,434 64	\$9,149,572 12

TABLE,

Showing by Counties the Number of Kegs of Powder Used at the Mines During the Year 1903, also Price Per Keg to Miners, and Tons of Coal Produced Per Keg.

County.	Tons.	Kegs of Powder.	Tons per Keg.	Cost to Miner per Keg.	
Clay	1,222,431	49,029	25	\$1 75	
Daviess	. 191.759	12,374	16		
rountain	Not reperted	12,011	10	1 75	
Gibson	46,700	1.599	29	1 55	
crreene	9 996 780	51,663	43	1 75	
Knox	137,949	7,836	18	1 75	
rarke	1 099 004 1	40,807	23	1 75	
ike	484,258			1 75	
Perry	11.120	$\frac{20,557}{701}$	24	1 75	
aniivan	1 1 559 990 1		16 65	1 75	
Anderburgh	204.648	23,526	69	1 75	
ermillion	942,165	6,880	30	1 75	
igo	1,716,726	32,796	29	1 75	
Varrick	1,110,120	71,669	24	1 75	
	. 315,641	8,383	38	1 75	
Total	9,992,553	327,820	30	\$373,685 00	

TABLE,

Showing Per Cent. in Gross Tons Produced, Gross Wages Paid, and Total Number of Persons Employed at Indiana Mines for Year 1903 over 1901 and 1902.

	1901	1902	1903	Per Cent. Gained Over 1901.	Per Cent. Gained Over 1902.
Total Tonnage Produced	7,019,203	8,763,197	9,992,553	42.3	14.02
Total Wages Paid	\$5,680,539 86	\$7,078,913 12	\$9,149,572 12	61.08	29.2
Total Employes	12,096	13,139	15,128	25.06	13.14

Showing Number of Miners, Machine Runners and Helpers, Loaders, Inside Day and Monthly Men, and Persons Employed Outside; Total Number of Employes at Each Mine, Number of Days Worked and Number of Mules Used; Totals by Counties, Expenditure for Improvements and Number of Kegs of Powder Used.

CLAY COUNTY.

NAME OF MINE.	Pick Miners.	Machine Runners and Helpers.	Loaders.	Inside Day and Monthly Men.	Outside Day Men.	Total Employes.	Days Worked.	Mules Used.	Fatal Accidents.	Improvements.	Number Kegs of Powder.
Brazil Block No. 1 Brazil Block No. 8 Diamond No 5 Brazil Block No. 11 Continental No. 1 Gart No. 7 Gart No. 7 Gart No. 7 Gart No. 10 Rebstock Briar Hill Cloverland No. 1 Fair Yiew Lawrence No. 6 Lawrence No. 7 Cornwell Crawford No. 3 Crawford No. 3 Crawford No. 5 Crawford No. 6 Crawford No. 6 Crawford No. 6 Crawford No. 6 Crawford No. 7 Eureka No. 7 Eureka No. 3 Fortaer Klondyke Gifford No. 1 Gifford No. 1 Gifford No. 2 Glen Pratt	23 17 16 20 26 34 27 6 136 18 18 65 84 67 41 53 52 46 60 22 43 90 90 90 78	12 12		20 34 32 10 8 8 4 15 14 3 8 8 45 9 9 10 11 11 12 20 20 25 20 10 7	711245599766655569645555664499102176	62 105 103 43 43 44 54 54 51 63 62 62 62 51 63 63 62 64 64 64 64	288 261 248 124 147 147 200 19 24 163 50 188 281 228 235 203 224 217 174 228 169 2216 169	701232667771557734443344445119655		\$336 00 5,035 65 8,313 41	1,088 2,597 892 1,120 609 1,228 320 5,050 750 1,222 1,995 2,224 1,985 607 1,481 2,037 3,056 5,000 3,565 5,100

Table Showing Number of Miners, Machine Runners and Helpers, etc.—Continued.

CLAY	COUNTY-Continued
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NAME OF MINE.	Pick Miners.	Machine Runners and Helpers.	Loaders.	Inside Day and Monthly Men.	Outside Day Men.	Total Employes.	Days Worked.	Mules Used.	Fatal Accidents.	Improvements.	Number Kegs of Powder.
Monarch Pearl. Lewis Silverwood No.3 Cloverland No. 2 Total.	16 95 32 47 1,445	68	10	19 16 1 12 5 452	2 8 4 9 4 217	37 119 19 53 56 2,356	267 220 52 183 77 5,536	2 7 1 7 2 193	5	\$13,685 06	2,713 125 727 49,029
		DAV	IESS CO	OUNTY.					·	<u>' </u>	<u> </u>
Cabel No. 4 Cabel No. 9 Hoosier No. 4 Montgomery No. 2 Mutual Union Mandabach	20 50 12 34 123 52 26 12			15 3 11 28 9 4	6 7 2 6 11 7 3	30 72 17 51 162 68 33 17	57 199 30 267 256 210 162 53	3 6 5 17 7 2 2	i	\$1.600 00 600 00	1,534 2,224 5,916 2,400
Total	329			76	45	450	1,234	42	2	\$2,200 00	12,374
•		FOUN	TAIN C	OUNTY							·
Diamond	8 42 16 66			2 8 1 11	. 2 6 8 16	12 56 25 93	48 23 26 97	1 2 1 4	1	\$30 60 3,100 00 \$3,130 00	

GIBSON COUNTY.

Oswald	54	 	30	17	101	140	12	 \$3, 554 05	1,599
Total	54	 	30	17	101	140	12	 \$3,554 0 5	1,599

GREENE COUNTY.

Black Creek	65	10	50	- 30	9	164	153	16	2	l	3,259
Island No.1		14	32	42	13	149	218	16			2,136
sland No. 2	· 50	34	50	40	27	201	215	15			2.280
Island No.3	83			23	10	. 116	216	13			2,576
Filmour	15	16	90	42	Ĩš	178	208	19			1.380
Hoosier No. 1	16	~ ~	22	-6	5	43	239	l š			514
sland Valley No. 3	120	 *.∣	_~	32	12	164	182	18		1 1	4 515
sland Valley No. 2	43			10	8	61	209	1 1	I	\$1,381 29	1,252
	150			31	ğ	190	208	17			5.456
South Linton		12	60	25	10	119	190	1 1			
didland	12	12	60	20	6	26		1 7			1,200
ulcan	17			54	Ö		81	1 1			400
Summitt No. 2	18	16	92	54	. 8	188	190	18		· · · · · · · · · · · · ·	1,70
Cempleton	93			. 21	11 13	125	280	13	1		3,600
Vietoria	164		****	30	13	207	254	11	1		8,497
Henburn	35	14	73	47	14	183	197	20	1		2,000
Antioch	78			36	11	125 71	288	7	2	12,724 76	2,707
ower Hill.	12	8	32	9	10	71	223	3		2,576 55	1.069
reen Valley		14	60	21	10	105	182	8	1		1.044
attis Creek No. 1		16	72	38	20	146	216	9		700 00	1.600
Atlas No. 1		10	45	18	10	104	233	9			1.44
Pry	25		l	6	ž	34		2		0.000.00	1,200
etsinger	16	g	18		ă	56		۱ ã	i	19 500 00	500
	10	0	26	21	11	56 76	172	ءَ ا	1	3,677 13	840
North West		l å	111	21	15	27	770	6	1 1	1 -,	
win		0	11	10	, é	99	49	5	1		200
[sland No. 5				120	1 7	32 54	39	2			38
Atlas No. 2	15	6	18	<u> ~</u>	8	04	39	3	• • • • • • • • • • • • • • • • • • • •		111
Total	1,112	196	751	610	275	2,944	4,512	248	11	\$43,106 12	51.66
TAMBI A	1 -,	150	701	1 010	410	-,011	1,012	2.0	1 **	Ψ10,100 12	01,000

Table Showing Number of Miners, Machine Runners and Helpers, etc. - Continued.

KNOX COUNTY.

NAME OF MINE.	Pick Miners.	MachineRunners and Helpers.	Loaders.	Inside Day and Monthly Men.	Outside Day Men.	Total Employes.	Days Worked.	Mules Used.	Fatal Accidents.	Improvements.	Number Kegs of Powder.
Bicknell	45 20 51 32 18 166			12 7 13 6 5 ——————————————————————————————————	10 5 7 6 3	67 32 71 44 26 240	202 69 172 100 202 745	8 4 7 5 3 27	2	\$50 00 800 00 \$850 00	3,496 3,000 840 500 7,836

PARKE COUNTY.

C. B. Harrison				1	1	8	20	2		\$40 00	2 32
W. P. Harrison Brazil Block No. 12	Not re	ported.	50	40	14	142	265	16		800 00	1 402
Cox No. 3.	77			25	14	116	260	10	i i	4,896 46	3,065
Lucia	57			18	7	82 57	202 202	12 13	2	600 00	2,568 1,778
New Century	Not re	ported.							·····		1,110
Lyford No. 1	17	12	40	31	15	98 112	175 249	7	······j·	15,871 00 2,200 53	1,341
McIntosh No.3	33			10	5	48	271	3		2,200 00	2,200
Superior No. 1	128			20 25	8	156 116	227 277	11	1 1		4,971 3,926
Superior No. 3	85			13	7	105	177	5	ı î		2,502
Minshal No. 1 Pan American				40 21	10	191 172	260 211	16		1,411 68	1 6,064 3,443
Brazil Block No. 9	93			31	9	133	178 238	. 9	1		1,743
Park No. 11	19	12	11	8	7	57	180	3		62 28	1,628 1,301
Minshal No. 2	17		l	3	4	24	. 27	1			41

Crawford No. 10 Crawford No. 8	Not re Not re	ported.										109 344 1,324
Total	975	56	146	335	142	1,654	3,419	136	10	\$25,881	95	40,807
		PI	KE COU	JNTY.								
Massey. Aberdeen Ayrehire No. 3 Ayrehire No. 4. Ayrehire No. 5 Blackburn Hartwell Littles. Rogers. Peteraburg Carbon Winslow Total	28 30 61 85 Not ree 48 90 122 20 35 177 80			5 8 8 21 26 12 14 35 5 , 16 6 22 170	3 6 9 20 8 18 11 1 7 4 15	36 44 91 131 68 122 • 168 20 58 27 117	195 204 156 140 123 178 176 27 159 228 184	3 17 10 	1	\$2,243 1,121 2,506 2,250 3,049 1,650 532 \$13,353	50 50 99 	1,200 1,200 6,944 1,708 2,730 4,220 106 1,549 900
		PEI	RRY CO	UNTY.								
Troy	20	ļ		3	3	26	205	2		\$480	00	701
Total	20			3	3	26	205	2		\$480	00	701
		SULI	LIVAN	COUNT	Y. ¬							
Lablanch Bunker Hill Caledonia Dugger Green Hill Hymera No. 1 West Linton Jackson Hill No. 2 Phoenix No. 1	20 Not re	12 8 8 12 ported	24 54 44 45 105	13 20 33 35 17 35	19 10 13 15 9 25	40 77 112 112 79 197	21 193 227 213 159 207 233 216	1 12 10 14 8 15	1 1 1	\$1,354 18,774 341 2,800	00 71	1,809 2,003 942 700 2,142

Table Showing Number of Miners, Machine Runners and Helpers, etc.-Continued.

SULLIVAN COUNTY-Continued.

NAME OF MINE.	Piok Miner	Machine Ru and Helpe	Loaders.	Inside Day a Monthly M	Outside Day	Total Emplo	Days Worke	Mules Used.	Fatal Acciden	Ітргочеше	Number Ke
Phoenix No. 3 Phoenix No. 5 Shelburn Star City. White Ash Freeman Sun Flower Glendors Hymers No. 2 Wilfred No. 1 Little Giant Cummins Citizens Mildred. Island No. 4 Mammouth Vein	15 37 4 51 30 1 2 12 8 12 8	16 16 12 12 12 12 10 10 10 178	73 103 85 70 28 17 6	12 9 52 117 23 377 227 18 15 4 1 2 2 6 4 1 6 4 1 6 4 1 6 4 1 6 6 4 1 6 6 6 6	3 9 9 24 7 7 5 10 115 14 110 115 5 4 6 6 4 2 283	22 70 40 1769 42 1197 123 625 21 15 28 22 2,120	203 84 183 212 217 77 208 200 191 219 125 103 24 50 20 20 19	3 6 6 14 5 4 8 10 0 111 7 7 3 4 2 1 2 1 2 1 — 1777	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$3,850 00 2,130 93 1,211 00	2,062 1,551 1,988 803 1,200 2,312 2,397 1,618 221 100 60

VANDERBURGH COUNTY.

Diamond First Avenue Ingleside Sunnyside Union Unity	Not re 61 30	ported.	 6 5 17 7 12	10 7 10 7 10	88 44 96	260 92 188 203 278	11 4	3	#500.00	732 2,032 144 3,972
Total	2 22		 47	40	309	1,021	· 29	. 3	\$ 500 00	6,880

Atherton	Bruilettes Creek No. 5 Buckeye Cayuga Crown Hill No. 1 Oak Hill Prince Willow Grove Crown Hill No. 2	115 47 15 133 141 155 70 Not re			22 25 17 4 22 37 34 10	18 10 18 3 10 11 10 7 67	150 72 222 165 189 199 87 1,005	131 181 235 2222 192 216 172 1,532	16 7 2 12 16 14 6 8	1 14	\$331 60 11,685 00 3,072 80 1,474 56 7,344 15	700 7,895 9,301 1,600 5,796 271 32,796
Rhoades			VI	GO · COT	NTY.							
I TOTAL	Rhoades Brick Works. Chicago No. 6. Diamond Peerless Lawton Union. Ehrlich. Grant No. 2. Glen Oak Hector Klondyke. Miami No. 1 Nickle Plate. Park No. 10 Ray Redbird Rosebud No. 2 Royal No. 1 Larimer Broadhurst Miami No. 2 Deep Vein Greenfield No. 1.	33 12 78 120 113 73 21 110 60 60 93 157 40 70 41 1128 95 22 22 25 40 40 27 36	12 30	67	17 4 140 200 208 24 111 18 38 13 13 7 20 5 5 8 6 12	8 2 2 8 13 13 11 12 5 11 11 17 6 4 4 9 12 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	58 184 184 184 184 184 184 184 184 184 18	49 1144 178 29 205 245 248 225 248 225 216 146 227 42 288 270 142 270 145 203 345	3 2 9 16 11 13 18 30 8	i i	\$250 69 216 00 250 00	600 1,200 4,000 2,575 3,660 2,330 923 4,947 3,899 3,035 3,621 4,973 2,830 2,145 4,220 4,414 717 3,280 778 1,860 1,925

Table Showing Number of Miners, Machine Runners and Helpers, etc.-Continued.

WARRICK COUNTY.

NAME OF MINE.	Pick Miners.	Machine Runners and Helpers.	Loaders.	Inside Day and Monthly Men.	Outside Day Men.	Total Employes.	Days Worked.	Mules Used.	Fatal Accidents.	Improvements.	Number Kegs of Powder.
Air Line. Big Four Big Vein No. 3 Caledonia Chandler DeForrest Star No. 1 Electric Total Grand total	13 13 24 17 44 132		42 39	4 15 10 3 7 3 9 8 	3 3 3 10 9 	28 81 87 19 34 23 63 52 387 15,128	247 244 155 210 186 127 130 149 1,448 29,928	37 4 33 32 9 4 35 1,300	1 1 1 3 3	\$1,52\$ 00 2,951 16 26 00 1,645 75 227 86 \$6,375 77 \$168,071 96	1,540 1,238 610 920 1,025 2,050 1,000 8,383

TABLE.

MACHINE MINES.

Showing by Counties the Name of Mines, Number and Kind of Machines, Tons of Coal-Mined, Number Miners Employed, Average Tons per Miner.

CLAY COUNTY BLOCK COAL MINES.

1	M	ACHINI			Miners	per	per
MINE.	Compressed Air Puncher.	Electric Chain.	Total Number Machines.	Tons Produced	Number of M Employed.	Average Tons Miner.	Average Tons per Machine.
Brazil Block No. 1. Brazil Block No. 8. Brazil Block No. 1. Diamond No. 5. Gart No. 10 Total General Average	:::::: ::::::	9 6 2 · 5 3	9 6 2 5 3 	12 094 35,110 1,673 44,009 27,447	12 43 16 43 19	1,008 812 105 1,023 1,445	1,344 58,578 836 8,802 9,149 5,013

PARKE COUNTY BLOCK COAL MINES.

Brazil Block No. 12	$^{12}_{7}$	12 7	55,875 11,222	6₹ 5 9	821 190	4,656 1,603
Total General Average	 19	19	67,097	127	528	3,531

CLAY COUNTY BITUMINOUS MINES.

Gifford No. 1	 6	6	27,958 35,072	43 45	650 779	4,659 5,845
Total General Average	 	12	63,030	88	716	5,252

GREENE COUNTY BITUMINOUS MINES.

Black Creek Island No. 1. Island No. 2. Gilmour. Hoosier No. 1 Midland. Summit No. 2. Glenburn Antioch. Green Valley Lattis Creek Atlas No. 1 Letsinger. North West No. 1 Twin Atlas No. 2	8 18	6 9 7 6	58888697678544325	80,111 67,149 110,774 20,925 100,185 147,631 99,215 31,782 86,386 108,961 75,478 18,325 26,177 2,615 4,892 4,892	60 46 84 106 26 72 108 87 50 74 88 55 26 34 17	1,201 1,460 1,318 1,283 804 1,391 1,367 1,140 634 1,167 1,238 1,372 706 770 153 149	16,022 8,393 6,154 17,003 10,462 16,697 16,403 14,173 6,238 12,340 13,740 15,095 4,581 6,544 871 2,446
Twin		3 2 5 77	3	2,615	17	153	871

MACHINE MINES-Continued.

PARKE COUNTY BITUMINOUS MINES.

		KIND O	es.		618		<u>.</u>
MINE.	Compressed Air Puncher.	Electric Chain.	Total Number Machines.	Tons Produced.	Number of Miners Employed.	Average Tons per Miner.	Average Tons per Machine.
Lyford No. 1	6	6	6	22,080 25,749	52 23	424 1,119	3,680 4,291

SULLIVAN COUNTY BITUMINOUS MINES.

VIGO COUNTY BITUMINOUS COAL MINES.

Atherton Lawton Glen Oak Parke No.10			4 2 6 15	39,713 3,920 165,715 146,988	43 7 79 70	900 531 2,090 2,099	9,928 1,960 27 519 9,799
Total General Average	15	12	27	355,736	199	1,285	29,645

WARRICK COUNTY BITUMINOUS MINES.

Electric. Big Four Big Vein	6	4	4 6 8	31,313 74,003 96,231	35 54 55	894 1,345 1,749	7,823 12,334 12,029
Total General Average	14	4	18	201,547	144	1,399	11,141
Grand Total	82	235	317	3,404,078	2,820	1,207	10,738

Nors.—Total pick miners, 7,808; total pick mine coal, 6,588,475 tons; average tons per miner. 843.

TABLE,

Showing Number of Miners, Total Wages of Miners and Average Wages Per Miner; Number of Inside Day and Monthly Men, Total Wages of Same, and Average Wages Per Man; Number of Outside Day and Monthly Men, Total Wages of Same, and Average Wages Per Employe, by Counties.

COUNTY.	Number of Miners.	Total Wages of Miners.	Average Earning Per Miner.	Number of Inside Day and Monthly Men.	Total Wages of Inside Day and Monthly Men.	Average Earning Per Inside Day and Monthly Men.	Total Wages of Persons Out- side.	Number of Persons Outside.	Average Earning Per Outside "Men.
Clay Daviess. Fountain Gibson Greene Knox Parke Perry Pike Sullivan Vanderburgh Vermillion Vigo. Warrick General Average	1,687 329 66 54 2,059 166 1,177 20 616 1,361 2222 276 1,828 276	\$736,361 87 131,413 05 9,028 33 24,854 19 1,228,519 74 78,796 92 699,901 77 7,412 74 292,045 31 766,741 31 134,192 28 538,829 07 1,088,557 30 157,026 13	\$436 43 451 11 136 79 460 28 596 65 474 68 593 79 370 63 474 09 563 36 604 46 702 51 568 58	452 76 11 30 610 43 335 170 476 47 171 498 59	\$315,330 88 42,503 13 2,531 37 15,609 54 427,766 47 28,118 42 268,874 31 2,069 69 105,706 67 322,156 76 35,535 68 140,071 21 309,604 55 34,661 66	\$697 63 559 12 230 12 520 81 602 89 654 38 802 60 689 89 621 80 673 79 756 07 819 12 621 69 587 60	\$137,624 60 21,525 94 1,776 93 10,769 33 231,759 18 15,676 27 119,728 18 1,632 92 52,180 01 175,538 92 23,007 82 69,547 49 145,599 92 22,793 96	217 45 16 17 275 31 142 3 102 283 40 67 229 52	\$634 21 478 30 111 03 633 48 842 76 505 68 843 15 544 30 511 55 620 31 575 12 1,038 02 640 12 438 30

Note.—Pick miners, machine runners and helpers and loaders are reported as miners.

TABLE,

Showing Price Paid Per Ton for Pick and Machine Mining, Inside Day Labor, Total Number of Employes, Total Production, Total Wages, Wages Per Year Per Employe, and Per Cent. of Gain or Loss Per Ton for Each Year from 1890 to 1903, Inclusive.

,	BLOCK	MINING.	BITUMINOUS MINING.		Day	r Em-	ction.		ar Per	j.	
YEAR.	Price Pick Mining.	Price Machine Mining.	Price Pick Mining.	Price Machine Mining.	Wages Inside Labor.	Total Number ployes.	Total Product	Total Wages.	Wages Per Ye Employe.	Per Cent. Gai	Per Cent. Los
1890 1891 1892 1893 1894 1895 1896 1897 1898 1899 1900 1900 1900 1901	\$0 75 75 75 75 76 70 61 76 76 90 90 90	\$0 57 57 68\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\$0 70 70 70 65 60 51 66 66 68 80 80 90	\$0 34\frac{1}{2}\$ 34\frac{1}{2}\$ 34\frac{1}{2}\$ 34\frac{1}{2}\$ 29\frac{1}{2}\$ 270 30 30 39 62 62 68\frac{1}{2}\$	\$1 874 1 874 1 90 1 90 1 75 1 75 1 75 1 75 2 25 2 30 2 56	6,550 6,975 7,600 7,431 Not- 7,885 7,112 7,984 7,366 8,858 12,096 13,139 15,128	3,791,211 3,819,600 4,408,471 reported. 4,026,934 4,068,124 4,088,100 5,140,920 5,839,713 6,283,063 7,019,203 8,763,197 9,992,553	\$1,852,500 00 1,750,000 00 1,600,000 00 1,182,500 00 3,813,652 39 4,843,343 26 5,680,539 86 7,078,913 12 9,149,572 12		29 ₁₇	7‡ 7 Å

Above Percentages are based on Pick Mining.

April 1st, 1900, Miners' Screens were reduced from 1½ inch mesh flat bar to 1½ inch mesh acron bar, which amounted to 5 cts. advance per ton on mining. Total reduction in price per ton from 1890 to 1897 amounted to 27½%.

Total gain 1903 over 1890, 35%.

Total gain 1903 over 1897, 86%.

FATALITIES AND INJURIES.

During the year 1903 there were more accidents to mine employes, fatal, serious and minor, than in any of the previous years in the history of the mining industry of this State.

The monthly reports of mine bosses made to this Office show an aggregate of two hundred and seventy-six (276) accidents, classed as follows: Fatal, fifty-five (55); serious, one hundred and forty-five (145); and minor, seventy-seven (77), the causes of which are shown by the annexed table.

TABLE,
Exhibiting the Number of Casualties Arising from Different Causes, 1903.

CAUSE OF ACCIDENT.	Fatal.	Serious.	Minor.	Total.
Falling slate Falling coal Mine cars Caught by cage Kicked by mule R. R. ears Windy shots Delayed shots Premature shots Smoke explosion Shot blowing through pillar Suffocated Powder explosion Explosion of kerosene Gas explosion Mining machine Fell down shaft Coal falling down shaft. Electric shock Miscellaneous causes	1 5 3 4 5 5 5 5 5 5 5 6 6 6 6 6 6 6 6 6 6 6 6	64 16 40 3 3 	27 5 18 5 2 2 1 1	1082 222 633 111 233 77 6 122 533 866 129 225 2215
Total	55	145	77	277

An investigation of each of the above fatalities, as well as a greater part of the serious accidents, was made either by myself or one of my assistants, and, with one or two exceptions, i. e., where persons lived for some time after being injured, the investigation of the fatal accidents was made in conjunction with the coroner of the county in which the accident occurred.

COMMENTS ON ACCIDENTS.

The increased number of casualties in 1903, as indicated by this report, is attributable, in some measure at least, to the number of new mines that have been opened, thus affording more avenues of danger—there being more coal mined, necessitating the employment of a greater number of miners and other mine employes, also the use of more explosives, all of which are important factors in the history of mine accidents. The prime factors, however, is the use, or in a majority of cases the misuse, of these explosives.

In making an inspection of a mine recently, I overheard a miner remark, "that powder was cheaper than muscle." This seems to be the maxim of the average miner today, hence the increase in the number of mine accidents.

In our report for the year 1901, we made the statement that at least fifty per cent. of the mine accidents for that year were due either directly or indirectly to the use of powder; by smoke explosions caused by a number of heavy shots being fired simultaneously; by premature and delayed shots, also by windy or blown-out shots, the latter being caused by shots that were either misplaced or overcharged; all of which is very destructive to the safety of the miners and the property of the mine owners.

It will require but a brief review of the table of causes and the description of casualties occurring in 1903, to substantiate the fact that the above statement will more than hold good for that year.

Of the thirty-four fatalities, as shown by the table, nineteen (19), 35 7-10 per cent., were due directly to the use of powder and other explosives, while seventeen (17), or nearly $31\frac{1}{2}$ per cent., were due to falling slate. Conservatively speaking, at least one-half of the latter number would have been avoided had the most ordinary precaution been taken in examining the roof after shots had been fired, and by resetting props which had been knocked down by coal thrown from such shots. All of such precautions are incumbent upon the miners for their own safety.

While discussing this subject, it will not be amiss to mention two other factors that have played important parts in connection with the fatal and serious accidents that have occurred within the past three years, viz., dynamite and fuse—the former being used in conjunction with blasting powder, resulting in almost every instance in an overcharged shot, while the use of fuse in preference to squibs has been the cause of accidents in many ways, such as delayed or premature shots.

The great danger in this practice is the fact that the shot firer will commence lighting shots at the head of an entry and continue from one room to another as long as there are any shots to light in that part of the mine, and the fuse on which the shots are tamped being cut at different lengths, will occasionally result in a dozen or more exploding simultaneously, causing a severe explosion, or an accident from the extra heavy concussion.

Both of the above practices can not be condemned too severely, and there should be laws enacted prohibiting the use of either dynamite or fuse in blasting coal.

Three of the unfortunates that met their death during the year were not mine employes. One, a boy under fourteen years of age (the minimum age prescribed by law at which boys are allowed to work in the mines of this State), had been sent into the mines by his parents to assist an older brother, who had been working with their father. The father was absent on that day. The other two persons were merely visiting the mine in which they met their death.

A history of each of the other fifteen fatalities not commented on above will be found in the description of fatal accidents given below.

FATAL ACCIDENTS.

CLAY COUNTY.

January 5th—Goldy Hadley, miner, was almost instantly killed in the Gifford No. 2 Mine. He was working off some loose coal in a break through, and in doing so, uncovered a bad slip in the roof, when at about 10 o'clock, apparently without warning, a large piece of slate fell, striking him on the head, crushing it so badly that he died in twenty minutes.

January 29th—Charles Smith, miner, aged forty-five years, having a wife and two children, was fatally injured by a fall of slate in the Klondyke Mine. He was at work in his room on the morning of above date, mining off some loose coal, when about 9:30 o'clock, apparently without warning, about four tons of slate gave way from a slip which had been exposed in the roof, falling on him and inflicting injuries from which he died at 3 o'clock of same date. His room was well timbered with the exception of this slip, which had been neglected.

April 15—Dora McCullough, driver, age twenty years, married, was fatally injured by being run over with a mine car in the Cornwell Mine. Evidence obtained at the investigation shows that there was a hill some fifty or sixty yards long with about 8 per cent. grade in favor of the loaded cars on the run on which he was driving, requiring two spraggs on one side and three on the opposite side of a trip of two cars. At the time of the accident his trip was found at the bottom of the hill with one spragg in it, and McCullough was sitting up leaning against the car as if he had been squeezed by the mule. He lived about forty minutes and was not able to talk during that time. He leaves a wife and one child.

July 8th—William Buckholz, miner, age twenty-six years, married, was killed by a premature blast in the Brazil Block Coal Company's No. 1 Mine. He and three other miners were employed driving a pair of entries through a rock fault in the above mine. About 3:30 o'clock of the date above named, they had three shots ready to fire in a break through, two sumpers, one located in each corner of the place and one near the roof in the center. The two sumpers were each charged with five sticks of dynamite, tamped on eighteen inches of fuse. The accident was caused in attempting to fire them.

Buckholz lighted one and turned to light the other, when he sank or fell forward on the one he had just lighted and lay there until it had exploded, killing him instantly. The supposition is that he had an attack of heart failure which caused him to fall. He leaves a wife and three children.

November 19—James McGowan, miner, age sixty-four years, married, was fatally injured by falling slate in the Brazil Block Coal Mine No. 1. He and his son were at work in his room in the afternoon, when, apparently without warning, a large piece of slate, 14x12 feet in width and length, fell on him injuring him so that he died three days later. He leaves a dependent wife.

DAVIESS COUNTY.

September 28th—Charles Mandabach, miner, age thirty-four years, married, has three children, was killed by falling down the Mandabach coal shaft, located near Washington. Deceased was one of the owners of the mine, and the morning of above

date he was working on the top, dumping coal. There were no gates at the top landing, and in switching an empty car he pushed it into the shaft, himself falling to the bottom, being killed instantly. A compliance with the statute requiring gates at the top of the shaft would have prevented this accident.

FOUNTAIN COUNTY.

October 14th—Fred Perry, miner, age twenty-six years, single, was fatally injured in the Rush Mine. At firing time on the evening of above date, deceased was standing in the entry when a very heavy shot was fired in a room some fifty feet distant, the force of which knocked him down striking his head against the rail and fracturing his skull. Death resulted a short time after.

GREENE COUNTY.

January 10th—Scott Padgett, age forty-one years, married, was fatally injured by the railroad cars at the Templeton Mine. He was employed to bring the flats down to the tipple at the mine, and about 10:45 o'clock, of above date, he was riding on the front end of a car which was being pulled down to the tipple by a mule. When some distance from the tipple he jumped off the car for the purpose of making the mule travel faster, and in so doing caught his heel in the switch frog, throwing him down across the rail. The car passed over both legs crushing them so badly that amputation was necessary, death resulting a short time after the operation was performed. He leaves a wife and nine children.

March 10th—C. Shuts, miner, age seventeen years, single, was killed by a blast in the Glenburn Mine. He was working in a room with his father at the time, and on the evening of above date the father had gone home, leaving the son to fire the shots, two in number. At about 3:30 p. m. he attempted to fire one of the shots when it exploded prematurely, either from a defective squib, or by his lighting the squib too close to the powder. He lived two days after the accident.

April 28th—Ross Figgins, machine helper, age thirty years, married was killed by falling coal in the Midland Mine. On the

above date he was at work shoveling slack after a machine. He and his machine runner were making the last cut in the right-hand corner of a room in which a piece of loose coal had been left from the preceding cut. They had the cut nearly finished, when about two and one-half tons of the coal gave way, striking and killing him instantly. He leaves a wife. This accident could have been prevented by a small amount of labor on the part of the loader in working off the loose coal.

July 1st—August Klusmier, miner, age twenty years, married, was instantly killed by falling slate in the Black Creek Mine. This accident was investigated by Mr. Dodds, Assistant Inspector of Mines, who reports that deceased did not have his room properly timbered, as being the prime cause of the accident. He leaves a wife and one child.

August 19th—Edward Culp, driver, age twenty-five years, married, was fatally injured in the Green Valley Mine. On the afternoon of above date, he had gone into an entry after a trip and had instructed another driver to follow him in and pull a car from a room outside of where Culp was going. The driver who followed him in left his empty car stand in the entry while he went into the room after the loaded one. Deceased seemingly had forgotten the instructions he had given the other driver, as he came down the entry at rather a fast rate of speed, standing on the front end of the loaded car, which collided with the empty one, crushing him, inflicting injuries from which he died ten days later. He leaves a wife and one child.

August 27th—Israel Hughes, Jerryman, age thirty years, married, was killed by falling slate in the North West No. 3 Mine. At about 11 o'clock on the above date, he and one other person were at work cleaning up a fall of slate on one of the cross entries when, apparently without warning, a large piece of slate fell on him, killing him instantly. The slate had been examined by himself and the boss in the morning before commencing work, both pronouncing it safe to work under. He leaves a wife.

August 28th—Michael Schafer, miner, age twenty-nine years, single, was fatally burned by a powder explosion in the Antioch Mine. On the afternoon of above date, he had made up his cartridges, and was cleaning a blasting barrel. In order to dry it, he fired a squib through it. The squib, passing through the

barrel, struck the face of the coal and bounded back into the loose cartridges, firing them, they in turn exploding the powder in the keg sitting near by, burning him so badly that he died three days later at St. Anthony's Hospital in Terre Haute.

October 15th—Logan Edington, miner, age seventeen years, single, was killed instantly by falling off an ascending cage in the Letsinger shaft. Little could be learned of this accident, other than the fact that the proper signal had been given. The engineer replied at the top of the shaft with the answering signal, after which deceased got on the cage and it was belled away. When the cage reached the surface he had disappeared. The supposition is that he lost his balance and fell off the cage.

December 4th—George Gilman, miner, age twenty years, was fatally injured by a delayed shot in the Black Creek Mine. Little could be learned of this accident other than the deceased had lighted his shot and retired to an adjoining room for safety, and after waiting a while, it is presumed, thinking the squib had gone out, he started back to try another one, but when within a few feet of the shot it exploded, injuring him so that he died on December 6th, at St. Anthony's Hospital, Terre Haute. He leaves a wife.

December 5th-Joseph Maney, age forty years, miner, married, was killed in the Antioch Mine by a piece of coal thrown This accident was investigated by Assistant Infrom a shot. spector Mr. Thomas, and from evidence obtained it was learned that there were four shots fired inside of the room in which deceased was working, one of which was in the face of the entry about eighty to one hundred feet distant. Also that the shots in this mine are tamped on fuse. At about 3:20 o'clock the entry man lighted his shot and ran past deceased's room calling him to come. Deceased then lighted his shot and ran out on the entry. Just as he reached his room parting, the shot in the face of the entry exploded, throwing a piece of coal, which struck deceased just behind the left ear, injuring him fatally. When found by parties who returned to look for him he was lying in an adjoining room in an unconscious condition, from which he did not recover. He leaves a dependent wife and two children.

December 17th—Charles Moore, miner, age twenty-three years, single, was killed by a falling slate in the Victory Mine.

Deceased and two other persons were working at night, shooting down slate, for the purpose of making height at a point on the double parting about seventy feet from the shaft bottom in the above mine. At about 10 o'clock p. m. of the date named they had fired two shots in the slate, one on each side of the entry. The shots did not bring the slate down, but left it in such a condition that it was almost ready to fall. For some reason, deceased went in under it, it is thought to get a couple of cappieces to be used as wedges, and while under it a large piece of the slate fell on him, inflicting injuries from which he died at 11 o'clock the following day.

KNOX COUNTY.

July 14th—Walter Welty, aged seventeen years, was killed by falling down the Knox Coal Company's shaft located at Bicknel. Deceased was not an employe of this company, but on this evening was visiting the night engineer. Deceased requested the engineer to let him down the shaft, which he refused to do. The engineer then went into the boiler room, to attend to his fires, and when he returned deceased had disappeared. On investigation he was found at the bottom of the shaft, life extinct. The supposition is that he opened the shaft gate to step on the cage, which he thought was at the ground landing. It being very dark, he did not see that the cage was not there and stepped into the open shaft.

December 14th—Claude Alsman, not an employe, age seventeen years, single, was killed by an ascending cage in the Knox Mine. This accident was investigated by Assistant Inspector Mr. Dodds, and from evidence taken at the inquest it was learned that deceased was not an employe of this company, but had gone down into the mine to visit some friends and look around the mine. When coming up out of the shaft with a number of other persons he lost his balance, presumably caused by the motion of the cage, leaned over and was caught by a buntin, and thrown back down the shaft, a distance of about seventy feet. Life was extinct when he was brought to the surface.

PIKE COUNTY.

December 19th—Riley Rumble, driver, aged twenty-six years, single, was fatally crushed between a mine car and the entry rib in the Littles Mine. He was standing on the front end of a trip of cars at a double parting. There were four mules standing in the way, and he was waiting for them to move, so that he could start to the shaft bottom with his trip. When his mule started to pull the cars, in leaning over to avoid the other mules, he was caught between the car and the rib and crushed so badly that he died two days later.

PARKE COUNTY.

January 7th—Peter August Johnson, miner, aged seventy-six years, single, was killed in the Mary Mine. He was at work loading a car of coal on the morning of above date, working some eight feet back from the face of his room, which was well timbered, when a piece of slate, about 250 pounds weight, fell on his back, driving his face to the floor. The supposition is, that the blow stunned him, and that while in this unconscious condition with the rock laying on his head, holding his face to the floor, he was smothered to death.

June 5th—William Daniels, shot firer, aged thirty-nine years, married, met his death by suffocation in the Briar Hill Mine. Deceased and one other miner were employed to fire the shots in the above mine.

It was developed by the investigation that on the evening of the 5th, they had nearly completed their work and a number of very heavy shots had been fired on the first south entry, this being the point where they were then working. The supposition is, that Daniels lost his way in the mine, owing to the powder smoke. When found he was lying near the face of the entry where the first shots were fired life extinct. He leaves a wife and two children. Overcharged shots were largely responsible for this accident.

July 6th—Jesse Perkins, miner, age fifty-two years, married, was killed by a premature shot in the Zeller-McClellan Columbia No. 1 Mine. He had tamped a shot on a fuse on the evening

of above date and about 3 o'clock attempted to fire it. The shot exploded while he was still trying to ignite the fuse, pieces of coal striking him and killing him instantly. His nephew, who was waiting to fire a dirt shot at the time, was also seriously injured by flying coal, having his leg fractured and was otherwise cut and bruised. Deceased leaves a wife. Had a squib been used in this instance, the accident might have been avoided.

August 14th—Bass Montgomery, fireman, age twenty-six years, married, was fatally burned by an explosion of coal oil at the Lucia Mine. About 2 o'clock on the night of above day, he was filling his miner's lamp from a coal oil can containing about one-half gallon of oil. While so engaged the oil in the can exploded burning him so badly that he died at 4 o'clock the following afternoon. He leaves a wife and four children.

September 15th—James Rosa, miner, age seventeen years, single, was suffocated by breathing heated powder smoke in the Columbia No. 2 Mine. He had gone into the mine about 7 o'clock p. m. of above date with Vennela Guido, a fellow miner, to assist him in firing a couple of shots, and as they did not come out as soon as expected, a searching party went into the mine after them. Both men were found unconscious in the room where the shots had been fired and deceased never regained consciousness. His companion, however, recovered after being brought to the surface, though suffering from the injuries received. It is presumed, as there was no evidence of their having been injured by coal, slate, or otherwise, that they had gone back into the room after the shots were fired to note results and were overcome by the smoke.

October 31st—Thomas Kerrick, miner, age twenty-eight years, married, was fatally injured by falling slate, in the Briar Hill Mine.

Deceased had gone into a fellow-miner's room to visit, and was standing somewhere near the center of the room when a piece of draw slate three and one-half inches thick, measuring eighteen by twenty-four feet wide, fell on him and so injured him that he died one hour later. He leaves as dependents a wife and two children.

November 30th—Albert E. Snodgrass, trapper, age fifteen years, was fatally injured by falling slate, in the Mecca No.

1 Mine. About 11 o'clock a. m. of above date, he was following his driver from his door out to the double parting when a large piece of slate measuring eleven by eight feet, length and breadth, four inches in thickness fell on him, inflicting injuries from which he died ten hours later

February 28th—Charles Wilden, miner, age forty-nine years, married, was fatally injured in the Cox No. 3 Mine, by being struck with pieces of coal thrown from a delayed shot. He had two shots ready to fire at firing time, 3:30 p. m., on the evening of above date, one of which he had lighted and retired to a place of safety. After waiting awhile, he heard a shot explode, which he thought was in his room. Results, however, proved it to be in an adjoining room. Having heard the explosion, he started back into his room to light what he thought was his remaining shot and when within ten or twelve feet of the face, his first shot exploded, pieces of coal from it striking and injuring him to such an extent that he died the evening of the same day. He leaves a wife and eight children. A compliance with the statute, requiring shots to be fired in rotation would have prevented this accident.

March 2d—Julius Currey, miner, single, age eighteen years, was killed by falling slate in the Lucia Mine. Evidence obtained at the investigation shows that at the time of the accident at 7:30 a.m., he was either setting a prop, or sounding the roof, it could not be determined which. He was found under a piece of slate with a sledge hammer in his hands. The section of slate was twenty-one feet long, seven feet wide and about eight inches thick. There were thirty-eight available props in the room at the time of the accident, and had a part of them been set, the accident could have been prevented.

May 15th—Matthew Barr, miner, age thirteen years, was fatally injured by falling slate in the Columbia No. 2 Mine. This was his first day in the mine and he was working with his father driving a break through off of a double parting. They had finished their day's work about 1:30 o'clock p. m., and the boy was back at the mouth of the break through gathering up some picks, when about one hundred pounds of slate fell on him, injuring him so that he died on the following day.

SULLIVAN COUNTY.

March 5th—Walter Kemp, driver, age twenty-two years, single, was killed in the Hymera No. 2 shaft about 11 o'clock on the morning of above day. Kemp, who was driving a mule on the night shift, got on the cage with his mule preparatory to leaving the mine. The cage was belled away in the usual manner, but when it reached the surface the mule was found standing on the cage, but the driver had disappeared. The alarm was given at once and on investigation, Kemp was found in the sump at the bottom of the shaft. No outcry, that would indicate what caused him to fall off the cage, had been heard.

March 14th—George Bemis (not employed), age fourteen years, was fatally injured by a mine car, in the Phoenix No. 5 Mine. On the morning of above day, he had gone into the mine to help his brother, and was assisting him to load a car of coal. There was considerable loose coal thrown on the roadway by a shot some distance back from the face of the room. The room they were working dips with rather a strong grade toward the face. In cleaning up the roadway, they had used a cap-piece to check the car. Deceased was working in front of the car, attempting to remove the chalk from in front of the car wheel for the purpose of letting the car down nearer the face of the room, when it started and caught him against a prop, crushing him, inflicting injuries from which he died within a few hours.

April 2d—Murry Hunt, driver, age twenty-one years, married, was fatally injured by a gas explosion in the Green Hill Mine. On the morning of above day, Hunt, in company with another laborer and the mine boss, had gone into the mine for the purpose of repairing a dam which had been built to shut off the water in the old workings. The dam had been constructed of three walls of timber, packed between with clay. In order to make the necessary repairs, the greater portion of these timbers had to be torn out.

By 9:30 o'clock a. m. two of the walls had been removed, and the mine boss had picked up a bar and knocked out the wedge over the inner wall and raised his lamp to the opening for the purpose of examining the interior of the dam. Considerable gas had accumulated in the old workings, which found vent through the opening just made and ignited from his lamp, causing an explosion. Hunt, who was standing directly in front of the dam, received the full force of the explosion, and was burned and bruised so badly that he died while being taken home, a distance of two miles. Carelessness on the part of the mine boss was exhibited here, he knowing that the mine generated both black and fire damp and that tearing away the barrier would allow either to flood that part of the workings.

May 11th—Ludwig Hoffman, loader, age twenty-five years, single, was killed by falling slate in the Star City Mine. On the evening of above date, he and another miner, with whom he was working had fired four shots, three in one room and one in the inside adjoining room, firing the one in the inside room last. On their way out of the mine they were crossing the outside room, which was very smoky, and Hoffman was in advance, had gotten about half way across it, when suddenly a large piece of slate gave way, falling on him and killing him instantly.

June 10th—Isaac Prior, timberman, age fifty-nine years, married, having a wife and four children, was fatally injured by falling slate in the Shelburn Mine. About 2:25 p. m. he was standing in the main air course, opposite a break through. The supposition is, that he was examining the roof when a large piece of slate fell on him, injuring him so that he died about 5 o'clock in the afternoon of the same day.

July 3d—Clarence Wharton, age eighteen years, single, was killed by falling slate in the Dugger Mine. This accident occurred at a double parting on one of the cross entries, the parting being a terminal for both mule and motor haulage.

The slate which fell on deceased was located at the inside end of this parting and was known to be loose for several days. Charles Wharton, father of deceased and assistant mine boss, had tried to take it down prior to the accident, but failed. About 10 o'clock on above date, deceased came into the parting with a loaded trip, and having turned his mule was in the act of hitching it to an empty car, when a large piece of slate measuring eight feet in length, three feet wide, and from six to twenty-two inches thick fell on him, killing him instantly. It appears from the foregoing that the proper precaution was not taken in this

instance, or the accident might have been prevented. The facts that the loose slate was located at a double parting where the drivers and mules during the day frequently were compelled to pass under it, in going to and from their work, and that the noise made by the tramping of the mules, moving mine cars, motors, etc., would drown any noise made by the slate in cutting, chipping, or other indications that it was about to fall, should have impelled double precautions being taken at points of this kind, in the way of timbering or taking the slate down.

October 8th—J. E. Chapple, miner, age nineteen years, single, was fatally burned by the explosion of a keg of powder in the Jackson Hill No. 2 Mine. A keg of powder which belonged to the deceased had been sent down the mine and was left laying on the roadside until it came his turn for a car. Deceased and a fellow miner were playing with the powder, driving nails into the keg, thus causing a spark which ignited the powder and brought about the explosion with the above results.

October 14th—A. L. Gaston, timberman, age thirty-nine years, married, was killed by falling down the Island Company's shaft No. 4. He was at work on the above date, putting a midwall betwen the hoisting and fan shafts. The midwall had been constructed to a depth of about one hundred and thirty feet, and the fan shaft was four by nine feet in size.

Deceased was lowering his brattice lumber shiplap, six inches by sixteen feet, down the fan shaft in a sinking bucket, the bucket being about two feet ten inches across. About 1:15 p. m. of above date, he had loaded the bucket with fifteen pieces of the shiplap, which were set in loose, the top ends dragging down the side of the shaft. He also got into the bucket himself to descend. Although advised by both the mine boss and the engineer not to do so, he persisted in going down with the lumber, and when about one hundred and thirty feet from the surface, which is about half way down, by some means or other he fell out of the bucket, falling to the bottom of the shaft and was instantly killed. He leaves a wife and six children.

December 8th—Adolph Hellman, loader, age forty years, married, was killed by a shot blowing through a pillar in the Hymera No. 1 Mine. He was working in room No. 30 on the second south entry. The room was only partially turned, being driven in

about twenty feet, and is directly opposite a break through which had been driven from the second south to within one foot of being through to inside south entry. This entry had been driven just about to the outside edge of the break through, and the entry man in the first south had drilled a hole in his entry in the rib next to the break through, and judging from the depth of the hole knew that his powder would be bedded somewhere opposite. Also knowing that the pillar was very thin, he warned deceased of the danger of remaining in his room when the shot was fired. About 1:30 o'clock p. m. the entry man lighted his shot and called deceased to come out of his room, he replied all right, but continued at his work until the shot exploded, blowing through the pillar and throwing a large quantity of loose coal into the room neck, striking him and killing him instantly. He leaves a wife and two children.

VANDERBURGH COUNTY.

The first fatal accident to occur in the mines of Indiana, during the year 1903, was that of Louis Pletcher and Richard Sanders, miners, both of whom were killed by a premature shot in the Sunnyside Mine, at Evansville, about 3 o'clock p. m., January 3d. There was no one present at the time the shot was fired, and as life was extinct in both when they were found, little could be learned as to the exact cause of the accident. On examination of the working place and surroundings, the face of a twelve-foot entry disclosed the fact that there had been two shots prepared, ready to fire, one in each corner of the face, but only one of which had been fired; the squib in the remaining shot showing evidence of having been lighted, as the sulphur on the match was considerably charred. Pletcher and Sanders were working buddies, driving a pair of entries together, and the presumption is that both had gone into the entry where the accident occurred, for the purpose of firing the two shots, each man to light one, and in doing so, the shot which exploded was either lighted too close to the powder, or the squib was defective, and when the shot exploded the concussion extinguished the remaining squib, with the result as above described.

December 2d—Wm. Ray, miner, age fifteen years, was fatally burned by a powder explosion in the Sunnyside Mine. About

10 o'clock a. m. of above date, he was filling a can of powder from a full keg, when his lamp fell into the can, exploding the powder therein as well as the remaining powder in the keg, inflicting burns from which he died during the night following.

VERMILLION COUNTY.

May 15th—Thomas Durkin, driver, age thirty-five years, married, was fatally injured by mine cars in the Oak Hill Mine. About 11 o'clock a. m. of above date, deceased had come out to the double parting with a loaded trip. The double parting is located at the foot of a hill some two hundred yards in length; the coal being hauled from this point by rope haulage.

A trip of fifteen cars had just reached the top of this hill, which rises with rather a sharp grade, when in some way they became detached from the rope and ran back down the hill into the empty siding, striking the empties between which deceased was standing, injuring him so that he died on the evening of the same day. He leaves a wife and two children.

July 27th—Joseph E. Balcak, car coupler, age twenty-six years, single, was killed by coming in contact with an electric wire, in the Klondyke Mine. About 1 o'clock of above date he was coupling cars on a siding or double parting which forms the east terminal of the motor haulage in the Klondyke Mine. The trolley wire extends in past the siding a short distance, and stands about thirteen inches above the top of the mine cars and about on a line with the outer edge of the car. Deceased had stooped under the wire, reached in between the cars and made his coupling and when rising touched the wire with his left shoulder. He tried to make an outcry and a trapper boy standing nearby seeing his condition ran to him and tried to pull him away from the wire, receiving a shock which knocked him down. The boy then ran for help, but when it had arrived Balcak was dead.

As soon as notified of the accident the engineer examined his voltmeter and found that it was carrying but two hundred and forty-seven volts, two hundred and fifty being the maximum load carried. It is generally considered by electricians and other persons conversant with electric power that two hundred and fifty volts will not kill a human being, and in fact is not considered

dangerous unless the contact continues for some length of time. In this connection we may say, there is never a day, in the mines somewhere in the State that some person does not come in contact with a live wire carrying two hundred and fifty volts, with no serious results.

In the above case, however, a combination of circumstances brought about the accident. The floor around the double parting was wet, and deceased was sweating and was resting his hands on the car irons, his left side also touching the irons on the car and his left shoulder the live wire, thus forming a direct circuit through his heart, which may possibly have been weak. The evidence proves conclusively that this death at least was due entirely to an electric shock.

July 20th—Harry Titus, miner, age twenty-five years, was fatally burned by a powder explosion in the Indiana Fuel Coal Company's No. 5 Mine. On the evening of above date he was making up his cartridges preparatory to charging his shots and was pouring the powder into the cartridge from a quart can which he had filled from his full keg, sitting near by. A spark fell from his lamp into the can, firing it, and this in turn exploding the powder in the keg, with above results. Had deceased observed the statute governing the distance a lamp shall be set from the powder when cartridges are being made up, this accident would not have occurred. Titus leaves a dependent wife and three children.

September 29th—Benjamin Bishop, shot firer, age thirty-five years, married, met his death from the effects of a windy or blown-out shot in the Indiana Fuel Coal Company's No. 5 Mine. Deceased and one other miner were employed as shot firers in the above mine. On the evening of the date mentioned they had nearly completed their work, each man working in separate parts of the mine. About 8 o'clock p. m. deceased fired a shot in the face of an entry. This shot was drilled three feet past the cutting or loose end, one foot past the cutting or loose end being the maximum distance. The shot was five and one-half feet thick, five feet being the maximum thickness provided by law.

The shot was fired with eight pounds of black powder and caused a smoke explosion. When found deceased was lying in

a room about fifteen feet from the face of the entry, life extinct. He leaves as dependents three children.

VIGO COUNTY.

January 26th—John Crabb, miner, age forty-eight years, married, was killed in the Glen Oak Mine. He was at work in his room loading a car, at 7:30 o'clock on the morning of above date, when about two tons of slate fell on him, killing him instantly.

His room was well timbered to within seven feet of the face, a large water slip lay across the face of the room which had been exposed by shots fired the previous evening, and he either did not notice it, or failed to examine the roof, as this was the direct cause of the accident. Deceased leaves a wife and five children.

January 26th—James Wesmer, miner, married, was suffocated by inhaling the smoke and heated air, caused by the burning of the tipple at the Harris and Lankford Mine. Somewhere between the hours of 8 and 10 o'clock on the morning of above date, Archie Ferguson, one of the top men employed about the mine placed a can of black oil or car grease by the side of the stove in the tipple, for the purpose of melting it, after which he resumed his work incident to the care of the pit top. The grease being set so close to the stove, soon became very hot and ignited, setting fire to the tipple, completely destroying it together with the head frame and fan house. There were nineteen persons and two mules in the mine at the time of the fire.

The driver at the bottom of the shaft was notified as soon as the fire was discovered and he gave the alarm to the men inside the mine, after which he returned to the shaft bottom and was hoisted to the surface on the cage. By this time, however, the fire had gained such headway that the cages could not be used, and there being no manway, or second outlet at this mine, the miners with one exception, Virgil Beck, who climbed the buntins, remained in the mine until the tipple had burned and until arrangements could be made for a rescuing party to enter and assist them. When the rescuing party had reached the men, it found Wesmer and four other persons badly overcome by the smoke and heated air. Wesmer died within a few minutes after being brought to the surface. The other four recovered in a very short

time with no very serious results. Fortunately none of the other miners were injured. Wesmer leaves a wife.

November 26th—Abel H. Pell, miner, age thirty years, married, was killed at the bottom of the J. Ehrlich coal shaft. He was at work on the above date, with the mine boss and a fellow miner, removing the old guides in the shaft preparatory to replacing them with new ones.

From evidence obtained at the investigation, Pell was working about seven feet up from the bottom of the shaft, standing on a buntin. About 8:30 the cage in the compartment in which they were working was ordered to the top of the shaft for the purpose of sending down a new guide timber, and it is supposed that the cage or water box, while descending in the opposite compartment from where deceased was standing, caught his head against a buntin, crushing it and killing him instantly.

WARRICK COUNTY.

September 25th—Thomas Robinson, miner, age fifty-five years, was fatally injured by a delayed shot in the John Archibald Coal Company's No. 1 Mine. At firing time, 3.30, on the evening of above date, he was attempting to fire a shot, having lighted the squib and retired to a place of safety. The squib did not fire as quickly as he thought it should and after waiting awhile thinking it had gone out, he went back into his place for the purpose of trying another one. When he had gotten within about eighteen feet of the face, the shot exploded, pieces of coal striking and so injuring him that he died within a few minutes. He leaves a wife and one child dependent.

September 11th—Stigal, miner, age fifty-three years, married, was killed by a premature blast in the Air Line Mine. From evidence obtained at the investigation of this accident it is evident that it was due to one of two causes, viz., a faulty squib, or carelessness in lighting it. An eyewitness who was standing within eighteen feet of deceased when he attempted to fire the shot testifies that the shot exploded almost the instant he touched the squib with his light. He leaves a wife and two children.

September 29th—Henry Shopenhurst, miner, married, was fatally injured by falling slate in the Big Vein No. 3 Mine. At 7:30 a. m. he was at work in his room loading a car of coal, shoveling from in front of the car. Suddenly a large body of coal gave way falling on him and injuring him to such an extent that he died at 11 o'clock a. m. of the same day. He leaves a wife.

A summary of the names of persons, occupation, date and cause of each death, the name of the mine and county in which the fatalities occurred are given in the following table:

REPORT OF STATE INSPECTOR OF MINES.

TABLE OF FATAL CASUALTIES.

DATE.	Name.	Age.	Depend- ents.	RESIDENCE.	Occupation.	CAUSE OF ACCIDENT.	MINE.	Company,
January 5 January 29 April 16 July 8 November 18.	Goldy Hadley	45 20 30 64	3 2 4 1	Brazil Stauaton Cardona Brazil Knightsville	Miner	Falling slate Falling slate Mine car Premature blast Falling slate	Gifford No. 2 Klondyke Cornwell Brazil B No. 1 Brazil B No. 7	Collins Coal Co. C. Ehrlich Coal Co. Jackson Coal and Mining Co. Brazil Block Coal Co. Brazil Block Coal Co.
	DAVIESS COUNTY.							
September 28. June 26	Chas. Mandabach Mat Ryan	34 38	3 4	Washington Cannelburgh	Miner Driver	Fell down shaft Falling slate	Mandabach Mutual	Mandabach Bros. Mutual Mining Co.
	FOUNTAIN COUNTY.							
October 14	Fred Perry	26		Cates	Miner	Windy shot	Rush	Rush Coal Co.
	GREENE COUNTY.							
January 10 March 10 April 28 July 1 August 19 August 27 August 28 October December 4 December 17.	Scott Padgett. Charles Shute Ross Figgins. August Klusmier Edward Culp I. Hughes Mike Schafer Logan Edington Geo. Hilman Jos. Maurey. Chas Moore.	18 30 40	10 1 2 2 1 1 3 1	Linton Linton Midland Linton Jasonville Javonville Antioch Midland Linton Antioch Linton	Laborer	Run over by cars. Premature shot Falling coal Falling slate Mine cars Falling slate. Powder explosion. Fell off cage Delayed shot Coal from shot Falling slate	Templeton Glenburn Midland Black Creek Green Valley Northwest No. 1. Antioch Letsinger Black Creek Antioch Victoria	Western Indiana Coal Co. Dickason Coal Co. Midland Coal Co. Black Creek Coal Co. Green Valley Coal Co. Northwest Coal Co. Antiooh Coal Co. Letsinger Coal Co. Black Creek Coal Co. Antioch Coal Co. Victoria Coal Co.

TABLE OF FATAL CASUALTIES-Continued.

KNOX COUNTY.

		_						
DATE.	Name.	Age.	Depend- ents.	Residence.	Occupation.	CAUSE OF ACCIDENT.	Mine.	COMPANY.
July 14 December 14.	Walter Welty Claude Alsman	17 17		Bicknel Bicknel	Not employed . Not employed .	Fell down shaft Ascending cage	KnoxKnox	Knox Coal Co. Knox Coal Co.
	PIKE COUNTY.							
December 19.	Riley Rumble	26		Littles	Driver	Mine cars	Littles	S. W. Littles Coal Co.
	PARKE COUNTY.							
January 7. February 28. March 2. May 15. June 15 July 6. August 14. September 15 October 30. November 30.	P. A. Johnson Cbas. Wilden Julius Currey Mattbew Barr Wm. Daniels Jesse Perkins. Bass Montgomery James Rosa Thos. Kerrick Albert Snodgrass	76 49 18 13 39 52 26 18 28 15	9 2 1 5	Brazil Coxville Mecca Perth Coxville Mecca Coxville	Miner	Falling slate. Delayed shot. Falling slate. Falling slate. Suffocated Premature shot. Explosion. Suffocated Falling slate. Falling slate.	Mary Cox No. 3 Lucia Columbia No. 3. Briar Hill Columbia No. 1. Lucia Columbia No. 2. Briar Hill Mecca No. 1.	Otter Creek Coal Co Brazil Block Coal Co. Rock Run Coal Co. Zeller-McClellan Co. Raccoon Valley Coal Co. Zeller-McClellan Co. Rock Run Coal Co. Zeller-McClellan Co. Raccoon Valley Coal Co. Mecca Coal and Mining Co.
•	SULLIVAN COUNTY.							
March 5 March 14 April 2 May 11 January 10 July 3 October 8	Walter Kemp George Bemia Murry Hunt Ludwig Hoffman Isaac Prior Ciarence Wharton J. E. Chapple	21 25 57 18	2 6	Hymera. Alum Cave Sullivan Star City Shelburn Dugger Jackson Hill	Driver Not employed Driver Loader Timberman Driver Miner	Fell off cage	Hymera No. 2 Phoenix No. 5 Green Hill Star City Shelburn Dugger Jackson Hill No. 2	Hymera Coal and Mining Co. N. Pittsburg Coal and Coke Co. Green Hill Coal Co. Harder-Hater Coal Co. Keystone Coal Co. Indiana Chicago Coal Co. Jackson Hill Coal and Coke Co.

	A. L. Gaston Adolph Hellman	56 7 40 3	Superior	Timberman Loader		Island No. 4 Hymera No. 1	Island Coal Co. Hymera Coal Co.
			V.	ANDERBURGH	COUNTY.		
January 3 January 3 December 2	Louis Pletcher Richard Sanders Wm. Ray	 15	Evansville Evansville Evansville	Miner Miner Miner	Premature shot Premature shot Powder explosion .	Sunnyside Sunnyside Sunnyside	Sunnyside Coal Co. Sunnyside Coal Co. Sunnyside Coal Co.
			,	VERMILLION O	COUNTY.		
May 15 July 27 July 30 September 29.	Thos. Durkin	35 3 26 25 4 35 3	Clinton Clinton Clinton Clinton	Driver	Mine car Electric shock Powder explosion . Windy shot	Oak Hill Prince Bruilettes No.5 Bruilettes No.5	Oak Hill Coal Co. Keller Coal Co. Indiana Fuel Co. Indiana Fuel Co.
,				Algo con	NTY.		
January 6 January 26 June 2 November 26.	John Crabb	48 6 1 29 6	Burnett W.Terre Haute	Miner	Falling slate Suffocated Descending cage Descending cage	Glen Oak Harris-Lankford Nickel Plate Ehrlich	Glen Oak Coal Co. Harris & Lankford. Brazil Mining Co. J. Ehrlich Coal Co.
		,		WARRICK CO	UNTY.	•	
September 11. September 25. September 29.	Wm. Stigal Thos. Robinson H. Shopenhurst	53 3 55 2 1	Chandler Newburg Boonville	Miner Miner Miner	Premature shot Delayed shot Falling coal	Air Line Star No. 1 Big Vein No. 3	Hall & Marsh. J. Archibald Coal Co. J. Woolly Coal Co.
	<u> </u>		<u> </u>				

TABLE.

Nationality of Persons Killed in Indiana Mines in 1903.

American Irish. Buglish Negro German Swede. Scotch	3 3 4 8	Polish. Slav Hungarian Austrian Total	1 2 1
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COMPARATIVE TABLE,

Showing Number of Tons Mined in Each Year, the Number of Persons Employed, and the Number of Tons Produced Per Each Death from January 1, 1879, to January 1, 1904.

YEAR.	Tons Produced.	Number of Employes.	Deaths.	Tons Per Death.
79.,	1,196,490	3,459		No report
80	1,550,375	No report		
81. 	1,771.5 6	4,567	10	177,153
182 	1.900.000	No report		
83	. 2,560 000	5,403	11	232,727
84	2,260,000	5,716		228,888
85		6,502	9 7	339,28
86	3,000,000	6,406	7	428,57]
87	3,217,711	No report	l	,0,.
88	3,140,979	6.685	17	184,76
89	No report			201,10
90	3,791 211	6,550	5	758.242
91		6.975	5	763.90
92	4,408 471	7,600	19	232,024
93	4.358.897	7,431	22	193,58
94	No report	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		100,000
95		7,885	23	182,699
96	4,068,124	7,112	28	170,2
97	4,088,100	7,984	16	262.630
98	5,146,920	No report	22	233.95
99	5,864,975	7.366	15	390.99
00	6,283,063	8.858	18	349.159
01	7,019,213	12.096	24	292,466
02	8.763 197	13.139	24	365,138
03	9.992.553	15,128	55	181,683

SERIOUS ACCIDENTS.

The same conditions, causes, etc., will apply to the serious accidents occurring in 1903 as those shown in the description and comments on the fatal accidents.

An aggregate of one hundred and forty-five (145) serious accidents is shown in the table of causes, sixty-four '(64), or nearly forty-four per cent., of which were caused by falling slate. On

investigation, at least 19 per cent. of those were found to have occurred at or near the working faces, and in a number of instances were the result of gross carelessness on the part of those injured by reason of their failure to examine the roof, take down loose slate and lack of sufficient props being set.

Twenty-six, or eighteen per cent., were due to explosives, causing windy shots, premature and delayed shots, overcharged shots, shots blowing through pillars, smoke explosions, etc. Of this number there are but few exceptions where the accident could not have been prevented by a reasonable amount of care on the part of those injured while handling explosives, tamping, charging, placing and firing shots.

Forty, or a fraction over twenty-seven and one-half per cent., of the one hundred and forty-five accidents, were caused by mine cars, and those injured were in most instances drivers. Of this class of accidents little can be said, other than the fact that driving is more hazardous than any other employment in or about a mine.

Three persons were burned, two slightly and one seriously, at the same time by a gas explosion. This accident could have been prevented had the persons injured heeded the advice and warning given them by a fellow workman, who on entering the mine early in the morning discovered that the mine doors used in directing the air current into the entry where the explosion occurred, had been left open during the night, thus cutting off the air from that part of the mine and allowing the gas to accumulate.

The remaining accidents were due to the different kinds of employment incident to the operations of a mine, and were generally not of a very serious nature.

A summary of the names of persons injured, occupation, dates, cause and extent of injury, the name of the mine company and county wherein serious accidents have occurred during the year 1903, are given in the following table:

TABLE OF SERIOUS ACCIDENTS.

DATE.	Name.	Occupation.	Injury.	CAUSE.	Mine.	Company.		
Jan. 30. Feb. 10. Feb. 17. Meb. 4. Meh. 28. Apr. 13. Nov. 20. July 18. July 17. Aug. 22. Aug. 13.	Dominic Delaco Archer Hagerty William Patterson Fred Hale Verner Jones William Lucas George Wyre James Thompson Alex McAnnis Nelson Backet Walter King Charles Bowers	Miner	Back injured Back injured Foot crushed Back injured Back injured Rib fractured Foot cut off Head bruised Breast injured Leg broken Face burned Ankle fractured	Falling slate Falling slate Mine car Falling slate	Diamond No. 5 Diamond No. 5 Cloverland Monarch Monarch Crawford No. 3. Cloverland Gifford No. 2 Cloverland Lawrence No. 7. Crawford No. 7. Lawrence No. 6.	Brazil Block Coal Co. Brazil Block Coal Co. Cloverland Coal Co. American Sewer Pipe Co. American Sewer Pipe Co. Crawford Coal Co. Cloverland C. al Co. Collins Coal Co. Colverland Coal Co. Zeller-McClellan Coal Co. Crawford Coal Co. Zeller-McClellan Coal Co. Zeller-McClellan Coal Co.		
	DAVIESS COUNTY.							
•••••	Henry May	Miner	Foot crushed	Falling slate	Cabel No.9	Cabel & Co.		
	FOUNTAIN COUNTY.							
	Robert Maurey	Miner	Leg broken	Falling coal	Eureka	Cayuga Press Brick Co.		
-	GREENE COUNTY.							
Jan. 2 Jan. 3 Jan. 13 Jan. 14 Jan. 14 Jan. 14 Jan. 22 Jan. 29	B. Marks Ira Watson Ed. Shoptaw Wm. Cramer Thomas McCauley Wm. A. Moore Harvey Gott Oscar Jackson Emerson Philips.	Miner	Back injured Back injured Finger cut off Face burned Face burned Face burned Face burned Finger cut off Spine dislocated Hand crushed	Falling slate Falling slate Mine cars Blown out shot Blown out shot Hlown out shot Mine cars Falling slate Mine cars	Midland Island Valley No. 2. Summit No. 2. Vulcan. Vulcan. Vulcan. Summit No. 2. Island Valley No. 2. Green Valley	Midland Coal Co Island Valley Coal Co. Summit Coal Co. Vulcan Coal Co. Vulcan Coal Co. Vulcan Coal Co. Summit Coal Co. Island Valley Coal Co. Green Valley Coal Co. Green Valley Coal Co.		

Feb. 3 Henry Mattox Feb. 7 Chess Jones Feb. 18 Jessie May. Feb 23 Thomas Jones Feb. 26 John Linenburg Charles Starks Meh. 9 Frank Mitchel Mch. 9 John Crouse Mch. 25 I. Griffith Apr. 11 Joseph Drake Apr. 12 Thomas Maybury Apr. 23 Frank Reynolds Apr. 29 Edward Brown June 27 George Nixon June 27 George Riter July 9 Lewis Shelly July 21 Henry Fields May 28 Sim Adkins Van Goin Aug. 13 L. McCoulough Aug. 31 Elmer Thompson Sept. 11 John Cox	Miner Miner Miner Miner Driver Driver Driver Miner Miner Miner Miner Miner Driver Driver Driver Driver Miner Miner Miner Driver Driver Driver Driver Driver Toriver Loader Laborer Driver Timberman Driver Loader Miner Miner Miner Miner Miner Miner	Foot crushed Body bruised Hip injured Foot crushed Foot crushed Back injured Back injured Back injured Back injured Leg broken Badly crushed Severely bnrned Wrist fractured Back injured Back injured Hips injured Leg broken Badly burned Ankle crushed Back injured Leg broken Back injured Leg broken Badly burned Back injured Leg broken Back injured Leg broken Back injured Back injured Leg broken Back injured Leg broken Back injured Foot crushed Jaw bone broken Leg broken Seriously burned Foot crushed	Falling slate. Falling coal Twisted into dump. Falling slate. Mine cars. Falling slate. Falling slate. Falling slate. Caught hy door Mine car Falling slate. Powder explosion. Mine cars. Mine car Mine car and mule. Mine car Mine car Mine car Falling slate. Falling slate. Falling slate. Falling slate. Falling coal Mine cars Falling coal	Montgomery No. 2. Island Valley No. 3. Atlas No. 1. Atlas No. 1. South Linton Black Creek. South Linton Midland Summit No. 2. Island Valley No. 2. Gilmour Lattis Creek No. 1. Summit No. 2. Leand Valley No. 3. Lattis Creek. Victoria Atlas No. 1. Midland Green Valley No. 3. Midland Green Valley No. 3. Island Valley No. 3. Island Valley No. 3. Island Valley No. 3. Island No. 1. Island No. 1. Island No. 1. Island No. 1. Island Valley No. 3. Island No. 1. Island Valley No. 3.	Davies Coal Co. Island Valley Coal Co. Johnson Coal Co. Johnson Coal Co. Johnson Coal Co. South Linton Coal Co. Black Creek Coal Co. South Linton Coal Co. Midland Coal Co. Midland Coal Co. Island Valley Coal Co. Indiana Southern Coal Co. Lattis Creek Coal Co. Lattis Creek Coal Co. Lattis Creek Coal Co. Lisland Valley Coal Co. Lisland Coal Co. Lattis Creek Coal Co. Midland Coal Co. Southern Indiana Coal Co. Island Valley Coal Co. Southern Indiana Coal Co. Island Valley Coal Co.
Apr. 12. Thomas Maybury. Apr. 23. Frank Reynolds. Apr. 29. Edward Brown June 6 George Rixon. June 7. George Ritter. July 7 Eli Turpen July 9 Lewis Shelly. July 21. Henry Fields May 28. Sim Adkins. Van Goin. Aug. 13. R. L. McCoulough. Aug. 31. Elmer Thompson.	Driver Driver Cager Loader Loader Laborer Driver Luborer Loriver Loader Loader Miner Miner	Back injured Back injured Hips injured Leg broken Badly burned Ankle crushed Back injured Leg broken Back injured Leg broken Back injured Leg broken Ankle dislocated Badly burned Leg broken Back injured	Mine car Mine car and mule Mine car Mine car Mine car Premature shot Falling slate Mine cars Falling coal Mine cars Falling slate Mine cars Falling slate Shot through pillar Falling slate Powder explosion	Summit No. 2. Island Valley No. 3. Island Valley No. 3. Lattis Creek Victoria Atlas No. 1. Midland Island Valley No. 3. Midland Green Valley. Gilmour Island Valley No. 3. Island No. 1. I land Valley No. 2. Gilmour Victoria. Summit No. 2. Summit No. 2. No. West No. 1. No. West No. 1. South Linton Black Creek Letsinger	Summit Coal Co. Island Valley Coal Co. Lattis Creek Coal Co. Victoria Coal Co. Johnson Coal Co. Midland Coal Co. Island Valley Coal Co. Midland Coal Co. Midland Coal Co. Green Valley Coal Co. Southern Indiana Coal Co. Island Valley Coal Co. Island Coal Co. Island Coal Co.

GIBSON COUNTY.

TABLE OF SERIOUS ACCIDENTS—Continued.

PARKE COUNTY.

DATE.	NAME.	OCCUPATION.	Injury.	CAUSE.	MINE.	COMPANY.
Jan. 5. Jan. 23. Feb. 19. Mch. 15. Apr. 9. Apr. 20. May 22. May 21. June 20. July 2. Aug. 13. Sept. 15. Oct. 5. Dec. 11. Aug. 12. Oct. 12. Oct. 12.		Miner Driver Machine R Machine R Motorman Miner Tripper boy	Badly burned Arm fractured Leg 'ractured Back injured Back injured Back injured Leg br ken Face burned Leg broken Leg broken Rib fractured Hand crushed Leg broken Back injured	Windy shot Falling slate Mine car Falling slate Motor Cage Falling slate Delayed shot Premature shot Falling slate Mine door-w shot Mine car Falling slate Falling slate Falling slate Falling slate Falling slate	Lyford No. 1 Lyford No. 1 Min-hal Brazil Block No. 12 Cox No. 3 Superior No. 1 Brazil Block No. 11 Mary Superior No. 1 Superior No. 1 Cox No. 3 Minehal	Plymouth Block Coal Co.

PIKE COUNTY.

PERRY COUNTY.

Mar. 26. Wm. Co	ing slate
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SULLIVAN COUNTY.

VANDERBURGH COUNTY.

Oct. 27	Wm. Shaken	Trapper boy	Ankle dislocated	Mine car	Sunnyside	Sunnyside Coal Co.

TABLE OF SERIOUS ACCIDENTS—Continued.

VERMILLION COUNTY.

DATE.	Name.	OCCUPATION.	Injury.	CAUSE.	Minr.	Company.
Mch. 20 Mch. 20 Mch. 20 Mch. 20	William Taylor	Driver	Leg fractured Hand crushed Leg fractured Badly burned Badly burned Badly burned Bodly burned Shoulder fractured	Mine cars	Bruilettes No.3 Oak Hill Buckeye Buckeye	Bruilettes Creek Coal Co. Oak Hill Coal Co. McClellan Sons' Coal Co. McClellan Sons' Coal Co.

VIGO COUNTY.

	i .					
Jan. 21 May 11 June 4 July 15 July 24 Sept. 16 Sept. 28 Oct. 14 Oct. 14	Arthur Felkins Percy Philips Winfred Starks Eugene Miller George Taylor K. Adams. John V. Bogle Charles Halskin Joseph Simpson	Miner Loader Miner Laborer Timberman Miner Laborer Miner Timberman	Leg fractured Leg fractured Leg fractured Back injured Back injured Back injured Back injured Arm broken Leg broken Leg broken Hip erusbed	Falling slate Falling slate Falling slate Premature blast Falling slate Falling slate Falling coal Falling slate Falling slate	Grant No. 2. Klondyke. Glen Oak Fauvre. Miami Seeleyville. Union Rosebud Union	Grant Coal and Mining Co. Bruilettes Creek Coal Co. Glen Oak Coal Co. Fauvre Coal Co. Miami Coal Co. Seeleyville Coal Co. Coal Bluff Mining Co. Seeleyville Coal Co. Coal Bluff Mining Co. Coal Bluff Mining Co.

NOTE.—The above table includes only those who have suffered broken bones, cuts, bruises, burns and such other injuries as we think require special mention.

ACCIDENTS TO MINING PROPERTY.

The most serious accident of the kind to occur during the year was the burning of the Harris and Lankford Mine.

Somewhere near 9 o'clock on the morning of January 26th, fire broke out in the tipple, igniting from a can of overheated car grease which had been placed near the stove to melt.

The result of this fire was the loss of one human life and two mules, also the total destruction of the tipple, engine-room and other mine buildings, which, including the ropes, cages and tipple equipment would place the financial loss near six thousand dollars.

The engine-room at the Star Mine, owned by the John Archibald Coal Company, in Warrick County, was destroyed by fire in March. The loss other than the building was very small as the hoisting machinery and boiler were left in comparatively good condition. The mine was idle about thirty days, which, of course, added considerably to the loss.

The Cable & Co.'s No. 4 Mine, located at Washington, Daviess County, was flooded with water in March and has not been operated since that time.

The engine and boiler rooms at the L. T. Dickason's Glenburn Mine, Linton, Greene County, were destroyed by fire on July 9th. Fortunately the boiler and hoisting machinery were not so badly damaged that they could not be repaired and hoisting resumed in a short time. The dynamo and other electric appliances were a total loss, which necessitated the mine being operated as a pick mine until they could be replaced with new machinery.

A serious fire occurred on July 14th at the Lawton Mine, resulting in a total loss of all mine buildings, as well as a part of the machinery. The work of rebuilding the tipple and setting the machinery, etc., was not completed until September 10th, at which time hoisting coal was resumed. This is one of the Coal Bluff Mining Company's properties. We did not obtain the estimated loss.

A serious mine fire occurred in the interior of the Crown Hill No. 2 Mine, Vermillion County, in August. The flames rushed up the shaft, completely destroying the curbing, tipple and outside buildings.

The Black Diamond Mine, in Fountain County, located near Silverwood, was flooded with water in September, and has since been abandoned.

TABLE,

Showing by Counties the Number of Steam Boilers, Number and kind of Motors, Number of Dynamos and Number of Compressors used at Indiana Mines, also the Number of Mines using Rope Haulage.

	Number and Kind of Boilers.			NUMBER AND KIND OF MOTORS.			-3	ıpres- Using	sing	
COUNTY		Flued.	Cylinder.	Total.	Third Rail.	Traction.	Total.	Number of Dynamos.	umber of mos. umber of (sors.	
Clay Daviess Fountain. Gibson Greene Knox. Parke Pike. Perrv. Sullivan. Vanderburgh Vermillion. Vigo Warrick. Total	27 4 41 5 18 1 10 54 7 23 22 8	6 24 662 665 1355192270	30 6 2 32 32 1 8 2 21 2	63 10 4 4 52 7 52 1 17 67 20 30 62 12	133	1 1 3 2	2 3 1 5 2	7 1 15 5 1 18 2 3 1 53	3 13	1 1 1 4

TABLE,

Showing by Counties the Names of Mines at Which Box Car Loaders are Used, Also Giving Name and Cost of Loader.

NAME OF MINE.	Name of Loader.	COST OF LOADER.
Brazil Block No. 1	AutumwaAutumwa	\$2,500 00 2,500 00
GREENE CO	OUNTY.	
North West Lattis Creek Green Valley	Autumwa	\$2,5 00 00 2,500 00 2,500 00
PARKE CO	UNTY.	
Brazil Block No. 12	Autumwa	\$2,500 00
PIKE COU	NTY.	
Hartwell	Christy	\$2,000 60
SULLIVAN C	OUNTY.	~
Mammoth Vein Wilfred. Glendora Oummins	Autumwa. Autumwa Autumwa Autumwa	\$2,50 0 00 2,500 00 2,500 00 2,500 00
VERMILLION	COUNTY.	
Rhodes	Autumwa	\$2,500 00

EXAMINATIONS.

Examinations of applicants to qualify as mine bosses, fire bosses and hoisting engineers were held at two different times within the past year with results as shown by the annexed table:

TABLE.

PLACE.	DATE.	NUMBER OF APPLICANTS.			PASSED.			
		2.12.1	М. В.	F.B.	н. е.	М. В.	F.B.	н. Е.
Terre I	Haute Haute	May 5	27 26	5 4	41 29	23 23	1 2	25 18
To	:al		53	9	70	46		43

We give herewith the names and addresses of those who qualified and received certificates at the above examinations:

MINE BOSS EXAMINATION HELD MAY 5TH.

NAMES.	Addresses.	NAMES.	ADDRESSES
Thomas Moses. P. H. Roeder John Wright Jas. Vennorman Thomas Anderson S. G. Raimy William E. Vanlien John Gardner Frank Norris John Harrison William Briddick John McLeonhardt G. W. Purcell	Dugger. Linton. Coal Bluff. Linton. Jasonville. Conter Point. Dugger. Linton. Linton. Harmony.	Malcolm Reed Jos. W. Morrison Chas. P. West John G. James Robert E. Collins Robert Baird Chas. W. Smith Louis Wantelet John Harrison Harry Tucker Edward Atkinson Walter Wright	Linton. Silverwood. Linton. Linton. Cotes. Clinton. Linton. Linton. Burnett. Linton.

HOISTING ENGINEER EXAMINATION, HELD MAY 5TH.

Linton. Winslow. Fontenet. Pleasantville. Linton. Linton. Carlisle. Rosedale. S. Linton. Clinton. Veedersburg. Linton.
1

FIRE BOSS EXAMINATION, HELD MAY 5TH.

MINE BOSS EXAMINATION, HELD OCTOBER 1st.

Names.	Addresses.	Names.	Addresses.
Bert McClanahan David Hoard Raymond Tanner Harry Milbourne Levi Bardsley S. T. Harvey Terrance Carroll John McCloud Silas Risher William Johnson A. R. Stanley T. I. Hiatt	Brazil. Linton. Lyford. Shelburn. Terre Haute. Linton. Sullivan. Linton. Jasonville. Sullivan.	Jos. Mullen Eli Mott F. A. Kichardson C. J. Lawton, Jr. Stephen Brown S. M. Miller James McGow Silas Johnson Mathew Bach John E. Lindsay Curtis Erwin	Linton. Brazil. Bicknell. Linton. Shelburn. Fontanet. Edwards. Littles. Harmony.

HOISTING ENGINEER EXAMINATION, HELD OCTOBER 1st.

FIRE BOSS EXAMINATION, HELD OCTOBER 1ST.

	*	
Harry Milbourn	Lyford.	

SERVICE CERTIFICATES.

Thirty service certificates were granted within the year, as follows: Mine Boss, 22; Fire Boss, 1; Hoisting Engineer, 7. Following will be found the names and addresses of those to whom certificates were issued:

MINE BOSS.

Names.	Addresses.	Names.	ADDRESSES.
Newton W. Lane Thomas Davidson W. E. Cowen Samuel Bradburg Hugh Waugh John H. Davis James Taylor William Perry W. P. Harrison Elza Eller M. D. Stevenson	Shelburn. Shelburn. Ehrmindale. Nyesville. Shelburn. Coal Creek. Rockville. W. Terre Haute.	Julius Ehrlich. John Baird, Sr. John T. Sterling. Fred W. Newton. John M. Lowory. John Taylor John Taylor Chas. Craig. James M. Scully. John Hill James A. Nolan	Cardonia. Delcarbo. Boonville. Shelburn. Shelburn. Evansville. Diamond. Alum Cave. Brazil.

HOISTING ENGINEER.

Names.	Addresses.	Names.	Apdirsses.
R. S. Taylor	Shelburn. Hymera. Seeleyville. Terre Haute.	Wm. H. Yeager Lew Davis James T. Mathews	Shelburn. Shelburn. Evansville.

FIRE BOSS.

Mark Headley	Shelburn.			

DIRECTORY OF MINES.

Table showing the names and addresses of persons and corporations operating coal mines in each county:

Name.	Address.	MINE.
Brazil Block Coal Company	Brazil	Brazil Block No. 1. Brazil Block No. 8.
Brazil Block Coal Company Brazil Block Coal Company	Brazil	Brazil Block No 11.
Brazil Block Coal Company		Diamond No. 3.
Brazil Block Coal Company	B azil	Diamond No. 5.
Brazil Block Coal Company Brazil Block Coal Company	Brazil	Gart No. 5. Gart No. 10.
Brazil Block Coal Company	Brazil	Gart No. 7.
Clay City Coal Co	Clay City	Briar Hill.
Zeller McClellan Coal Com-	.	0111
Zeller-McClellan Coal Com-	Brazil	Cloverland.
nunv	Brazil	Lawrence No. 8.
Zeller-McClellan Coal Com-		£*
pany	Brazil	Lawrence No. 7.
Jackson Coal and Mining	Brazil	Cornwall.
Crawford Coal Company	Brazil	Crawford No. 2.
Crawford Coal Company	Brazil	Crawford No. 3.
Crawford Coal Company	Brazil	Crawford No 5.
Crawford Coal Company	Brazil	Crawford No. 6. Crawford No. 7.
Crawford Coal Company Eureka Block Coal Company	Terre Haute	Eureka No 2.
Eureka Block Coal Company	Terre Haute	Eureka No. 3.
C. Ehrlich Coal Company	Turner	Fortner.
C. Ehrlich Coal Company	Turner	Klondyke. Hifford No. 1.
Collins Coal Company	Brazil Brazil	Gifford No. 2.
Coal Bluff Mining Company	Terre Haute	Pratt.
Coal Bluff Mining Company	Terre Haute	Glen.
Continental Coal and Mining		Continental.
Crawford Coal Company	Brazil	Rebstock.
Indiana Bituminous Coal	DIGE	
Company	Terre Haute	Fairview.
Lewis Coal and Mining Com-		Lamia
pany Zeller-McClellan Coal Com-	Lewis	Lewis.
pany	Brazil	Cloverland No. 2.

DAVIESS COUNTY.

NAME.	Address.	Mine.
abel & Company	Washington	Cabel No. 4.
rbel & Company	Washington	Cabel No. 9
aglesville Coal Company aviess County Coal Com-	Raglesville	Hoosier No. 4.
pany viess County Coal Com-	Montgomery	Montgomery No. 2.
pany		Montgomery No. 3
utual Mining Company andabach Bros. Coal Com-	Cannelburg	Mutual.
pany	Washington	Mandahach
heatland Coal Company	Washington	Wheatland.

FOUNTAIN COUNTY.

Rush Coal Company	Cates Silverwood	Rush Silverwood.

GREENE COUNTY.

Black Creek Coal and Mining Company Island Coal Company Island voal Company Island Coal Company Island Coal Company Indiana Southern Coal Company Hoosier Coal Company Hoosier Coal Company Island Valley Coal Company South Linton Coal and Mining Company Vulean Coal Company Summit Coal Company Western Indiana Coal Company	Linton Linton Linton Linton Linton Chicago, Ill Bloomfield Linton Linton Midland Linton Indianapolis Chicago, Ill Terre Haute	Black Creek. Island City No. 1. Island City No. 2. Island No. 3. Gilmour. Hoosier No. 1. Island Valley No. 2. Island Valley No. 3. Midland. South Linton. Vulcan No. 1. Summit No. 2. Templeton.
L. T. Dickason Coal Company L. T. Dickason Coal Company Tower Hill Coal Company Green Valley Coal Company.	Chicago, Ill Bloomington Linton	Victoria. Glenburn. Tower Hill. Green Valley.
Lattas Creek Coal Company. Johnson Coal and Mining Company. Anticch Coal Company Fry Coal Company	Terre Haute	Lattas Creek No. 1. Atlas. Antioch. Fry.
Hoosier Coal Company Letsinger Coal Company Northwestern Coal Company Coal Bluff Mining Company.	Linton	Hoosier No. 2. Letsinger Northwest. Twin Island No. 5.
Island Coal Company Johnson Coal and Mining Company	Linton Columbus, Ohio	Atlas No. 2.

KNOX COUNTY.

Bicknell Coal Company	Indianapolis	Edwardsport. Lynn. Knox. Prospect Hill.
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PARKE COUNTY.

NAME.	Address.	MINE.	
Brazil Block Coal Company. Brazil Block Coal Company. Brazil Block Coal Company. Brazil Block Coal Company. Bock Run Coal Company. Wabash Valley Coal Com-	Brazil	Brazil Block No. 12. Cox No. 3. Brazil Block No. 9. Lucia. Mecca No. 1.	
Vabash Valley Coal Com- pany	Chicago, Ill Brazil	Lyford No. 1. Mary.	
pany	Brazil	McIntosh No. 3.	
New Century Coal and Miling Company Leller, McClellan & Company Leller, McClellan & Company Leller, McClellan & Company Minshal Vein Coal Company Lymouth Block Coal Company	MontezumaBrazilBrazilBrazil	New Century. Superior No. 1. Superior No. 2. Superior No. 3. Minshal No. 1.	
B Harrison W. P. Harrison	Carbon	Pan-American. Harrison. Harrison.	•
Raccoon Valley Coal and Mining Company Parke County Coal Company Minshal Vein Coal and Min-	Terre Haute Rosedale	Raccoon. Parke No. 11.	
Minshal Vein Coal and Min- ing Company	Terre Haute	Minshal No. 2.	
	PERRY COUN	ry.	
Bergenroth Bros	Troy	Troy.	
	PIKE COUNT	Υ.	
Aberdeen Coal Company D. Ingle Coal Company D. Ingle Coal Company D. Ingle Coal Company D. Ingle Coal Company S. W. Little Coal Company	Littles	Aberdeen. Ayrshire No. 3. Ayrshire No. 4.	
S. W. Little Coal Company S. W. Little Coal Company S. H. Wulfman Coal Company J. Wolley Coal Company Aberdeen Coal Company	Evansville	Ayrshire No. 6. Blackburn. Littles. Rogers. Hartwell. Petersburg. Carbon. Massey.	
S. W. Little Coal Company S. W. Little Coal Company S. H. Wulfman Coal Company J. Wolley Coal Company Aberdeen Coal Company	Evansville	Blackburn. Littles. Rogers. Hartwell. Petersburg. Carbon. Massey. Winslow.	٠.
S. W. Little Coal Company S. W. Little Coal Company S. H. Wulfman Coal Company J. Wolley Coal Company Aberdeen Coal Company Winslow Gas Coal Company Winslow Gas Coal Company Wweshington Fuel Company.	Evansville Evansville Huntingburg Evansville Littles Oakland City Winslow SULLIVAN COU	Blackburn. Littles. Rogers. Hartwell. Petersburg. Carbon. Massey. Winslow.	
S. W. Little Coal Company S. W. Little Coal Company S. H. Wulfman Coal Company J. Wolley Coal Company Aberdeen Coal Company Winslow Gas Coal Company Winslow Gas Coal Company Winslow Gas Coal Company Washington Fuel Company.	Evansville Evansville Huntingburg Evansville Littles Oakland City Winslow SULLIVAN COU	Blackburn. Littles. Rogers. Hartwell. Petersburg. Carbon. Massey. Winslow. NTY. Bunker Hill. Caledonia.	• .
S. W. Little Coal Company. S. W. Little Coal Company. S. H. Wulfman Coal Company. J. Wolley Coal Company. Massey Coal Company. Massey Coal Company. Winslow Gas Coal Company. Winslow Gas Coal Company. Washington Fuel Company. Company Indiana Chicago Coal Company. Green Hill Coal and Mining	Evansville Evansville Huntingburg Evansville Littles Oakland City Winslow SULLIVAN COU Chicago, Ill Chicago, Ill	Blackburn. Littles. Rogers. Hartwell. Petersburg. Carbon. Massey. Winslow. NTY. Bunker Hill. Caledonia. Dugger.	• .
S. W. Little Coal Company. S. W. Little Coal Company. S. H. Wulfman Coal Company. J. Wolley Coal Company. Aberdeen Coal Company. Massey Coal Company. Winslow Gas Coal Company. Winslow Gas Coal Company. Washington Fuel Company. Company. Indiana Chicago Coal Company. Green Hill Coal and Mining Company. Company. Hymera Coal and Mining.	Evansville Evansville Huntingburg Evansville Littles Oakland City Winslow SULLIVAN COU Chicago, Ill Chicago, Ill Sullivan	Blackburn. Littles. Rogers. Hartwell. Petersburg. Carbon. Massey. Winslow. NTY. Bunker Hill. Caledonia. Dugger. Green Hill.	
S. W. Little Coal Company. S. W. Little Coal Company. S. H. Wulfman Coal Company. J. Wolley Coal Company. Aberdeen Coal Company. Massey Coal Company. Winslow Gas Coal Company. Winslow Gas Coal Company. Winslow Gas Coal Company. Tainbow Coal and Mining Company. Green Hill Coal and Mining Company. Hymera Coal and Mining Company.	Evansville Evansville Huntingburg Evansville Littles Oakland City Winslow SULLIVAN COU Chicago, Ill Chicago, Ill Sullivan Chicago, Ill	Blackburn. Littles. Rogers. Hartwell. Petersburg. Carbon. Massey. Winslow. NTY. Bunker Hill. Caledonia. Dugger. Green Hill. Hymera No.1.	
S. W. Little Coal Company. S. W. Little Coal Company. S. H. Wulfman Coal Company. J. Wolley Coal Company. Aberdeen Coal Company. Massey Coal Company. Winslow Gas Coal Company. Winslow Gas Coal Company. Tainbow Coal and Mining Company. Indiana Chicago Coal Company. Green Hill Coal and Mining Company. Hymera Coal and Mining	Evansville Evansville Huntingburg Evansville Littles Oakland City Winslow SULLIVAN COU Chicago, Ill Chicago, Ill Chicago, Ill Sullivan Chicago, Ill Chicago, Ill	Blackburn. Littles. Rogers. Hartwell. Petersburg. Carbon. Massey. Winslow. NTY. Bunker Hill. Caledonia. Dugger. Green Hill. Hymera No. 1.	

SULLIVAN COUNTY-Continued.

	JELIVAN ÇOUNTI-	
NAME.	Address.	Mine.
White Ash Coal Company Sullivan Coal Company Sun Flower Coal Company	Terre Haute Dugger	White Ash. Freeman. Sun Flower.
Sun Flower Coal Company. W. S. Bogle Coal and Mining Company. Wilfred Coal Company Island Coal Company Mammoth Vein Coal Com-	Chicago, Ill Shelburn Linton	Glendora. Wilfred. Island No. 4.
Mammoth Vein Coal Com- pany	ShelburnLintonChicago, Ill	Mammoth. Little Giant. Cummins.
pany	Farmersburg Sullivan Evansville Terre Haute	La Blanz. Citizens. Mildred. Bruillettes Creek No. 6.
, and a sample of the sample o	VANDERBURGH C	OUNTY
	VANDERBURGH	OUNTI,
Diamond Coal Company H. A. Lozier Coal Company John Ingle Coal Company Crescent Coal Company Eyansville Coal and Mining	Evansville Evansville Evansville	Diamond. First Avenue. Ingle. Unity.
Evansville Coal and Mining Company	Evansville	Union.
	VERMILLION CO	UNTY.
Bruillettes Creek Coal Com-	Clinton	Bruillettes Nos. 3, 5.
pany McClellan's Sons & Company Cayuga Press Brick Company Clinton Coal Company Oak Hill Coal Mining Com-	Clinton Cayuga Clinton	Buckeye. Cayuga. Crown Hill.
pany	Clinton Chicago, Ill	Oak Hill. Prince. Willow Grove.
Willow Grove Coal Company Brazil Block Coal Company Clinton Coal Company	Clinton Brazil Clinton	Rhodes. Crown Hill No. 2.
	VIGO COUNT	Y.
m II t. Duish and Dina		
Terre Haute Brick and Pipe CompanyBig Vein Coal and Mining	Terre Haute	Brick Works.
Company Coal Bluff Mining Company Coal Bluff Mining Company Coal Bluff Mining Company Coal Bluff Mining Company J. Ehrlich Coal Company Coat Coal Company	Chicago, Ill Terre Haute Terre Haute	Diamond.
Coal Bluff Mining Company.	Terre Haute	Lawton. Union.
J. Ehrlich Coal Company Grant Coal Company Glen Oak Coal and Mining	Seeleyville Grant	Ehrlich. Grant No. 2.
Glen Oak Coal and Mining Company Loughner Coal Company Bruillettes Creek Coal Com-	Chicago, Ill Seeleyville	
pany	Clinton	Klondyke. Miami. Nickelplate.
Brazil Mining Company Parke County Coal Company Vigo Coal Company	Rosedale Seeleyville	Ray.
Fauvre Coal Company Seeleyville Coal and Mining	Indianapolis Seeleyville	
Company Seeleyville Coal and Mining		↓

VIGO COUNTY-Continued.

Name.	Address.	Mine.
Harris-Landford Coal and Mining Company Home Coal Company Home Coal Company Home Coal Company Miami Coal Company Deep Vein Coal Company Greenfield Mining Company Sugar Creek Coal Company Lost Creek Coal Company	W. Terre Haute W. Terre Haute Terre Haute Indianapolis Brazil Terre Haute Terre Haute Terre Haute Terre Haute	Larimer. Eagle. Broadhurst. Redbird. Miami No. 2. Deep Vein. Greenfield Sugar Creek. Lost Creek.
	WARRICK COU	NTY.
Hall & Marsh. Big Four Coal Company. J. Wolley Coal Company. Caledonia Coal and Mining Company. J. A. Bryan Charles Menden John Archibald Coal Company. T. D. Scales Coal Company.	Evansville Boonville Evansville Evansville Evansville Evansville Evansville Evansville	Air Line. Big Four. Big Vein No. 1. Caledonia. Chandlier. DeForrest. Star No. 1. Electric.

Names and addresses of mine bosses of the various Indiana mines:

	ODAI COUNI	
Names.	Addresses.	Mines.
John Botin	Brazil	Brazil Block Coal Company No. 1.
Jame- Burt	Brazil	Brazil Block Coal Company No. 8.
Joseph C Winn	Brazil	Diamond No. 5.
Samuel Holden	Brazil	Continental.
A. P. Gilmour	Knightsville	Gart No. 7.
William Rosser	Diamond	Gart No. 10.
John Jenkins	Brazil	Rebsteck.
Fred Ebermine	Knightsville	Cloverland.
Wm. Myers	Turner	Fairview.
Fred George	Harmony	Lawrence No. 6.
The mas Thompson	Hoosierville	Lawrence No. 7.
Moses Marks	Cardonia	Cornwall.
Walter Knox	Asherville	Crawford No. 2.
Griff Howell	Centerpoint	Crawford No. 5.
William Spears	Brazil	Crawford No. 6.
Samuel Lindsay	Hoosierville	Crawford No. 7.
J hn T. Summers	Carbon	Eureka No. 3.
H. B. Ehrlich	Turner	Fortner.
Jacob C. Ehrlich	Staunton	Klendyke. Gifford No. 1.
James Drumm	Brazil	Glen.
John Barker	Brazil	Monarch.
James A. King	Cloverland	Cloverland.
M. D. West	Coal Mont	Lewis.
	Brazil	Cloverdale No. 2.
George Myers	DIAZIL	6107014220 2107 =
	DAVIESS COUN	TTY.
A. Kocher	Washington	Cabel No. 9.
Arnold Brown	Montgomery	Montgomery No. 2.
Edward Dant	Montgomery	Montgomery No. 3.
Daniel Davis	Connelburg	Muiual.
W. A. Jacobs	Raglesville	Union.
Jacob Mandabach	Washington	Mandabach.
Frank Harris	Washington	Wheatland.
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FOUNTAIN COUNTY.

Name.	Address.	Mins.	
Wm. Perry	Silverwood	Rush.	
	GIBSON COUN	TY.	
George Archibald	Princeton	Oswald.	
	GREENE COUN	TY.	
Reuben Small Richard Potts Silas Richer T. Roberts James M. Scully Frank Lockhart George Epperson Joseph Fennel W. T. James John Jennings Joseph Gibson Wm. McQuade James Burke Woody Badders John Kelly Joseph Stevenson Thomas Thomas Isaac Valentine Thomas Hiatt James Baxter Wm. Vanhorn Den Davis John Quigley Charles Vaughn W. McChalp	Linton Linton Linton Linton Gilmour Linton Jasonville Linton Jasonville Linton	Black Creek. Island No. 1. Island No. 2. Island No. 3. Gilmour. Hoosier No. 1. Island Valley No. 2. Island Valley No. 2. Island Valley No. 3. South Linton. Midland. Vulcan. Summit No. 2. Templeton. Victoria. Glenburn. Antioch. Tower Hill. Green Valley. Lattas Creek No. 1. Atlas No. 1. Fry Letinger. Twin. Island No. 5 Atlas No. 2.	
	KNOX COUNT	YY.	
R. M. Freeman William Lynn Ellis G. Hooper Phelix Mullin	Bicknell	Bicknell. Knox. Lynn. Prospect Hill.	
C. B. Harrison W. P. Harrison Chas. C. Dodge George H. Dodge James Lamb Morgan Roberts Edward Allias Wm. Vanlieu John Chesterfield John Suttie George Myers Nap Harris Jos. Donahey Silas Jones Thomas Dalton James M. Coakley Thomas Karrack George Mitch	Rockville Rockville Knightsville Coxville Montezuma Mecca Montezuma Lyford Brazil Brazil Brazil Brazil Brazil Brazil Brazil Roseal Rosedale Rosedale	Harrison. Harrison. Brazil Block No. 12. Cox No. 3. Lucia. Mecca No 1. New Century. Lyford No. 1. Mary. McIntosh No. 3. Superior No. 1. Superior No. 3. Minshal No. 1. Pan-American. Brazil Block No. 9. Raccon. Parke No. 11.	

PERRY COUNTY.

Name.	Address:	Minr.
Wm. Schmuck	Troy	Troy.

PIKE COUNTY.

H. L. Williams	Oakland City	Massey.	
John Jones			
Bart Stinson			
W. L. Smith	Ayrshire	Ayrshire No. 4.	
J. Johnson	Ayrehire	Ayrshire No. 5.	
D. Ingle, Jr	Ayrshire	Ayrshire No. 6.	
John Wiley	Petersburg	Blackburn.	
George Briggs	Hartwell	Hartwell.	
Herman Rosa	Littles	Littles.	
H. T. Brewis			
John D. Johnson			
John Jennings	Winslow	Winslow.	

SULLIVAN COUNTY.

Martin Navin		Bunkerhill.
James Stewart	Farnsworth	Calladonia.
Chas. Horton	Dugger	I)ugger.
Wm. Epperson	Sullivan	Green Hill.
John Evans	Hymera	Hymera No. 1.
John Griffith	Dugger	West Linton.
George Sargant	Jackson Hill	Jackson Hill No. 2.
Asa Roberts	Alum Cave	Phoenix No. 1.
Alex Fauld	Alum Cave	Phoenix No. 3.
C. C. Hall	Shelburn	Shelburn.
H. D. Wooley	Delcarbo	Star City.
Wm. Green	Hymera	
O. H. Hendrickson	Dugger	
Thomas Leighman	Dugger	Sun Flower.
Walter Philips	Sullivan	Glendora.
Theodore Thompson	Hymera	Hymera No. 2.
Ed. Newport	Shelburn	Wilfred No. 1.
David Love	Dugger	Island No. 4.
John Crosby	Pleasantville	Little Giant.
John Patton	Cummins	Cummins.
John D. Price	Farmersburg	LaBlanz,
Richard Jones	Sullivan	
John McCloud	Suliivan	Mildred.
	•	•

VANDERBURGH COUNTY.

S. T. Harvey Wm. Chesterfield. R. M. Irwin Wm. F. Brown. Wm. Hutchison Frank Christy James Boskell. Samuel Ogden.	Clinton. Cayuga. Clinton. Clinton. Clinton. Clinton.	Buckeye. Eureka. Crown Hill. Oak Hill. Prince Willow Grove.	
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VIGO COUNTY.

Name.	Address.	MINE.
Samuel Holden	Coal Bluff	Chicago No. 6.
Richard Jackson	Burnett	Diamond.
harles Long	. Coal Bluff	Peerless.
Joh n Cain	. Coal Bluff	Lawton.
ames Johnson	. Fontanet	
J. L. Devonald	. Burnett	Grant No. 2.
Samuel C. Watts	. Burnett	Glen Oak.
Thomas Maxwell	. Seeleyville	Hecktor.
William Scank	. Burnett	
John Baird	. Brazil	
Thomas Bingham	. Heckland	Parke No. 10.
R. T. Bieler	West Terre Haute	Redbird.
J. D. Lewis	. Seeleyville	Rosebud.
John Scott	. Seeleyville	Royal No. 1.
John F. Irwin	. West Terre Haute	Larimer.
W. N. Broadhurst	. West Terre Hante	
William Winn	. Ehrmindale	Miami No. 2.
Richard Morgan	. West Terre Haute	Deep Vein.
James A. Erwin	West Terre Haute	

WARRICK COUNTY.

T. B. Hall John E. Kelley P. F. Hargrove L. M. Gaisser John McCain Mark Wilson Edwin Archibald	Boonville Boonville Boonville Chandler DeForrest	Big Four. Big Vein No. 3. Caledonia. Chandler. DeForrest. Star No. 1.	
William Mason	Boonville	Electric.	

IN THE FOLLOWING SUMMARY WILL BE FOUND MOST OF THE IMPORTANT TOTALS FOR THE STATE FOR THE YEAR.

SUMMARY 1903.

Number of counties having shipping mines	14
Number of mines working more than ten men	184
Number of new mines	37
Number of mines abandoned	11
Number of pick miners employed	7,808
Number of machine, runners and helpers	588
Number of loaders	2,232
Number of inside day and monthly men employed	2,981
Number of outside day and monthly men employed	1,519
Total number of all employes	15,128
Number of days worked	29,928
Number mules used	1,300
Number kegs of powder used	327,820
Amount of wages paid to miners	\$6,017,021 20
Amount of wages paid to inside day and monthly men	2,085,116 28
Amount of wages paid to outside day and monthly men	1,047,434 64

Total amount of wages paid to all employes	\$9,149,572 12
Amount of money spent on improvements	168,071 96
Total tons machine mine block coal	187,430
Total tons hand mine block coal	838,510
Total tons block coal	1,025,940
Total tons bituminous hand mine coal	5,749,965
Total tons bituminous hand mine coal	3,216,648
Total tons bituminous machine mine coal	8,966,613
Total tons hand mine coal	6,588,475
Total tons machine mine coal	3,404,078
Total tons of coal produced	9,992,553
Total tons of coal consumed in Indiana	5,009,081
Total tons of coal shipped outside of Indiana	4,983,472
Total number of steam boilers	401
Total number of electric motors	20
Total number of dynamos	53
Total compressors	13
Number of compressed air punching machines	82
Number of electric chain machines	235
Total number of mining machines	317
Total number of box car loaders	12
Total number of fatalities	55
Total number of serious accidents	145
Total number of minor accidents	77
Total number of accidents	277