

Year
ending Oct 31, 1886

MINE INSPECTOR'S REPORT.

KNIGHTSVILLE, IND., December 30, 1886.

To His Excellency, ISAAC P. GRAY,
Governor of Indiana:

SIR—In accordance with the statutes, relative to mines and mining in Indiana, I have the honor to submit the Seventh Annual Report of the Mine Inspector. This report contains the estimated coal production, capital employed, list of fatal and non-fatal accidents, number of scales tested, itemized statement of money used in the transportation of sealed weights, number of persons employed in all mines, the names and addresses of owners and location of all mines that have employed ten or more men, a short description of their general condition and the improvements made, some suggestions for the improvement of the mining laws. This report is for the year ending October 31, 1886. I also hand you herewith a printed copy of amendments that the miners are anxious to have enacted into laws. All of which is respectfully submitted.

THOS. McQUADE,
Inspector of Mines for Indiana.

In my last report complaints were made about being unable to give accurate statements of either the coal tonnage or capital invested in the mines of the State, because I had failed to get answers to printed blanks sent out asking for such information. This year no such blanks were used, as I considered them a bill of expense from which no benefit would be realized. I am therefore placed in the same position regarding the out-put and the increased capital invested in the mines that I was last year, having no information of any value on either subject. The coal trade for this year has been remarkably good except

a few months in the summer season. All the mines connected with railroads have been operated to their full capacity. In addition, several new mines have been opened and but few have been abandoned. Add to the fact that Indiana has had fewer strikes and less disturbance of all kinds among her mines this year than ever before, it will then be safe to say that the productions of coal for this year must be greater than any preceding year. I have therefore put the production at 3,000,000 tons, or 25,000 more than was reported last year.

In estimating the capital invested in mines, it is safe to say there is an increase over the amount reported last year of at least \$125,000, making the total amount now invested in mines \$1,975,000. It was my desire to give the actual amount of money invested in new mines, improvements, etc., in the various counties, and upon inquiry being made, it appeared that the bank bosses (the men the Inspector sees oftener than any one else around the mines) knew nothing and could not give the desired information. In some instances I applied in person to the offices of the coal company, and then owing to the fact that those in possession of such information were not in, I was compelled to estimate with the above result.

ACCIDENTS, FATAL AND NON-FATAL.

Below is given a list of fatal accidents, the total number being seven; one more than the number reported last year. This, if correct, is a remarkably good showing for our State, but I am of the opinion all are not reported. The total number of non-fatal accidents is nine. Total number of fatal and non-fatal, sixteen, as against thirty-two reported last year. In my report last year I was of the opinion that all accidents that had occurred in the State had not been reported to me. I am still of that opinion. It seems that in a State like ours, where so many men are employed in mines, and where the danger is so great, that there certainly must be more accidents. Why they are not reported I can not tell, unless that bank bosses and mine owners, not compelled by law to keep a record of such accidents, either forget their occurrence or willfully neglect to say anything about them. The statutes require the Inspector to report all accidents occurring in the mines. They should also require owners and operators to report such accidents to

the Inspector, and upon failing to report such accidents a fine should be imposed; it would in all probability sharpen their recollections and enable the Inspector to give more complete reports of accidents occurring in the State. The accidents here given are all such as are liable to happen to the unfortunate miner at any time, with the exception of Geo. Haurshier, who lost his life while attempting to light a shot after five others had been fired, near the face of entry where he with his father was making a break-through to the air course. The white damp overcame him, and, when taken out, life was extinct. It seemed that the boy had gone to the mine after supper to fire this shot, leaving his father at home without any knowledge of the danger he was in, and the consequence was, he walked to his death, and lost his life. I have repeatedly called the attention of men in charge of mines to the fact that they should not allow men to work in places that are turned beyond the last break-through from an air course to an entry. But it seems whenever there is a good demand for coal, that they crowd men into every available place regardless of whether there is air circulation in them or not, and to the discredit of the miner be it said that they often ask for and insist on being allowed to work in places that they know are ahead of air. To prevent this, there ought to be a stringent law placed upon our statutes which would prevent mine bosses from putting men to work in places that are ahead of air, or allowing them to turn either rooms or entries ahead of the last break-through, made from an entry to an air course. John McCafferty, lost his life by premature explosion of a blast, he was at the time working in No. 4 Mine, owned by the Parke County Coal Company. It appears he intended to fire two shots and had fired one, and returned to light the other, and just as he put his light to the squib and turned to get away from the coal that was liable to fly from the explosion of the powder, the shot went off, the coal striking him about the head and face, knocking him down, where he was found two hours after by friends who went in search of him. Now, I do not hold the company for which this man worked responsible for his death, but I do think the men who worked near him were to blame. Had any one been at hand when the accident happened to render assistance to get him out of the powder-smoke, he would have probably lived; miners should remember their vocation is a dangerous one, and the most care-

ful may be caught at any time. They should be very careful of both themselves and their fellow miners, and never under any circumstances leave one man alone to fire two shots.

Joseph Ellhott, who was also killed by a blast, was drilling out the tamping in a hole where powder had been placed with fuse to ignite it, and after igniting the fuse and waiting for a few minutes for the powder to explode he returned, and began drilling out the tamping, when, without a moment's warning, the powder exploded. It appears the fuse had not become extinguished; instead, it had been burning all the time. There must have been a part of it that there was no powder in. Hence the delay in igniting the powder, resulting in Mr. Elliott's death. This kind of accident is hard to avoid. The only prevention I know of is for men never to drill out the tamping until all chances of the fuse still burning have disappeared, and never under any circumstances use an inferior grade of fuse. In England men are prohibited by law from drilling the tamping out of holes after powder has been put in them and failed from any cause to explode; such a law in Indiana would save life.

FATAL ACCIDENTS.

December 24, 1885. George H. Haurshier, from effects of white damp in Peant Mine, owned by Zeller & Sigler, in Clay County.

February 10, 1886. Robert Templeton, by falling slate in Gart. No. 1, Clay County.

May 20, 1886. Name unknown, falling slate, Diamond Mine, Parke County.

July 6, 1886. David Rooker, falling slate, Buckeye Mine, Daviess County.

October 16, 1886. John McCafferty, premature blast, No. 4 Mine, Parke County.

October 23, 1886. Oscar Leahman, by falling slate, Nickle Plate Mine, Clay County.

October 27, 1886. Joseph Elliott, by premature blast, in Diamond No. 2, Clay County.

NOT FATAL.

December 1, 1885. Wm. Simpson, leg broken by fall of coal in Nickle Plate, Clay County.

January 15, 1886. Thos. Powell, leg broken by premature blast in Nickle Plate, Clay County.

September 1, 1886. Fritz Carroll, arm broken by lifting on a car, Unity Mine, Vanderburgh County.

September 6, 1886. Andrew Gates, arm and breast injured by premature blast, Wilson's Mine, Daviess County.

September 17, 1886. John McLeuhardt, back injured by bank cars running over him, Crawford's, Clay County.

September 20, 1886. Michael Navin, arm broken by fall of coal, Gart. No. 1, Clay County.

October 6, 1886. Frank Lawrence, arm burned by premature blast, Wilson's Mine, Daviess County.

October 23, 1886. Samuel McGurty, breast and knee injured by fall of slate, Nickle Plate Mine, Clay County.

October 27, 1886. John Phillips, face and head injured by premature blast, in Diamond No. 2. Clay County.

SCALES.

Since my last report, forty-six tests of scales have been made. Of this number twenty-four were correct and twenty-two incorrect; of the whole number found incorrect, four weighed against the companies and eighteen against the miners.

Below is given an itemized statement of how the money appropriated by the State Legislature, to defray the expense for transportation of sealed weights used in testing scales, was expended for 1885-86, the total amount being \$122.00 and the total number of scales tested seventy-two. I do not advise the further appropriation of money to defray the expenses of carrying weights unless the mining laws are amended. See recommendations to mining laws.

EXPENSE OF TRANSPORTATION OF SEALED WEIGHTS FOR 1885.

1885.			
June 11.	To T., H. & I. Railroad, for freight	\$1 55	
" 11.	John Dougherty, team one day.	3 00	
" 16.	John Dougherty, team three-fourths of a day	2 00	
July 20.	John Dougherty, team one-half day.	1 50	
" 23.	C. & E. I. Railroad, for freight	2 95	
" 23.	Drayage from Perrysville to Coal Creek	3 00	
" 24.	James McVey, team one day	4 00	
" 25.	James McVey, team one day.	3 00	
" 25.	C. & E. I. Railroad, for freight.	4 00	
" 25.	Team for hauling weights to mines	2 25	
" 30.	C. & E. I. Railroad, for freight	2 55	
" 31.	John Dougherty, team three-fourths day	2 00	
Aug. 27.	John Dougherty, team one-half day.	2 00	
Sept. 7.	John Dougherty, team one day.	3 00	
" 18.	John Dougherty, team one-half day	2 00	
" 26.	John Dougherty, team one day	3 00	
	Total for 1885.		\$41 86

EXPENSE FOR TRANSPORTATION OF SEALED WEIGHTS FOR 1886.

1885.			
Nov. 19.	To John Dougherty, team three-fourths day.	\$2 00	
" 21.	John Dougherty, team three-fourths day	2 00	
Dec. 16.	John Dougherty, team one day	3 00	
1886.			
Jan. 21.	John Dougherty, team three-fourths of a day	2 00	
Feb. 8.	John Murphy, team one and three-fourths of a day	5 00	
" 21.	John Archer, team one-half day	2 00	
" 24.	C. & E. I. Railroad, for freight	3 00	
" 25.	Livery man at Clinton.	2 50	
Mar. 1.	I. & St. L., for freight	2 00	
" 1.	Wm. Acres, team one-half day	2 00	
" 5.	I. & St. L. Railroad, for freight	90	
" 5.	Thos. Keegan, team one-half day	2 00	
Apr. 29.	John Dougherty, team one-half day	2 00	
June 10.	John Dougherty, team for one day	3 00	
July 6.	John Dougherty, team for one day	3 00	
" 15.	John Archer, team for one day	3 00	
" 20.	John Archer, team one-half day	1 50	
" 27.	John Archer, team one-half day	1 50	
Aug. 4.	John Dougherty, team one-half day	1 50	
" 5.	C. & E. I. Railroad, for freight	1 20	
" 6.	Livery man at Clinton, team one-half day	2 00	
" 9.	C. & E. I. Railroad, for freight	1 20	
" 10.	John Archer, team one-half day	1 50	
" 20.	John Archer, team for one day	3 00	
Sept. 6.	John Archer, team one-half day	1 50	
" 20.	John Archer, team one-half day	1 50	
" 21.	John Archer, team one and one-quarter day	4 00	
" 22.	John Archer, team one and one-quarter day	4 00	
" 24.	John Archer, team one-half day	1 50	
Oct. 9.	John Dougherty, team one-half day	1 50	
" 15.	E. & T. H. Railroad, for freight	3 90	
" 15.	Hackman, Evansville, team one day	3 00	
" 18.	T. H. & I. Railroad, for freight	3 50	
" 26.	John Archer, team one day	3 00	
	Total amount for 1886		\$80 20
	Grand Total for the Years 1885-86		\$122 00

In making suggestions as to what amendments should be made to the laws relative to mines and mining, I again recommend the amendment suggested last year, with some additions. They are :

First.—A permanent place should be fixed by law for the office of the Inspector with a suitable appropriation to furnish such office, to provide it with furniture, books, stationery, etc. Also works of competent authors containing treatises on mines and mining. The mine owners throughout the State should be compelled by law to report all accidents, of any kind, affecting the life or safety of the men employed by them in the mines. They should also be required by law to fill out such blanks as the Inspector might see fit (at the end of each fiscal year or at any other time) to send to them for information. Under the present law, the Inspector is expected to give all the information about mines that are operated in the State that is worth knowing, but no provision is made whereby the Inspector can get such information from the owners or agents of mines, and the consequence is, when the time arrives for him to make his report, he has nothing to compile that report from, except such notes as he may be able to make while on his semi-annual tour of inspection. For this reason the Inspector's reports for Indiana do not contain as much information as they should to make them interesting and sought for by those they should benefit.

Second.—All expenses connected with the office of Inspector should be paid by the State. If this were done, I am of the opinion the Inspector would be better able to carry out the provisions of the mining law. Under the present statutes the Inspector is required to make at least two visits a year to each mine in the State the law applies to. Some of the mines need his attention oftener, but owing to the fact that he has made two visits to the mine he does not return again because the expense connected with the trip comes out of his own pocket. In Ohio there are four Inspectors, one chief Inspector and three assistant Inspectors. Each is paid the same salary that our Inspector gets. In addition to this all traveling expenses of the four are paid. By doing this they are much more serviceable.

Third.—Section 5477 of the Revised Statutes of 1881 provides that no boys under the age of fourteen years be employed to work in any of the mines of this State, but there is no

means provided for ascertaining the ages of boys. On my rounds through the mines I frequently see boys at work, who are not, in my opinion, the required age, and when asked, they in almost every instance answer fourteen, and the men they work with will verify their statement. It seems the boys are taught to say fourteen whenever anyone asks them about their age, when in reality they are not more than eleven or twelve years. As a remedy for this growing evil, all men who have boys at work with them should furnish an affidavit from the parents or guardians of the boy, stating the boy's age, and such affidavit or copy of it to be furnished the Inspector when he calls for it.

Fourth.—Section 5480 of the Revised Statutes of 1881 amended by the Acts of March 3, 1883, provides for the testing of scales at the mines, and if found incorrect, notice to be given to the owner or agent of such incorrectness, and after such notice, it is made unlawful for any owner or agent to use or suffer the same to be used until they are adjusted so that they will give the true and correct weight. In trying to enforce this section of the law, I have, in every instance where a scale was found incorrect, given the required notice to either the owner or agent, and, so far as I know, the owner and agents (with one exception) have not used scales after such notice until they were adjusted. But in many instances I have been requested by the miners to return to test a scale that had just been tested a few days before, and complaints have been made to me by responsible men that the scale that had been found to weigh anywhere between fifty and five hundred pounds to the ton, in favor of the company, had not been giving any better satisfaction in the matter of weight after being adjusted by the company. Thus it will be seen that great dissatisfaction exists among the miners about weight. To strengthen the law in this respect, there should be an amendment making the company or individual operating a mine finable whenever the Inspector tests and finds them incorrect. The fines should be made large enough to make it interesting for the individual whose scales are found incorrect, and inspire an earnest desire on the part of the law-breaker to be sure that he had his scales adjusted before they were again used; in addition to this, the weighman employed by either the company or the men to weigh coal should be sworn to weigh all coal honestly, and see that all coal that was dumped into the flat or other instrument

of transportation is properly credited to the miner, and that in the event any falls off the flat or wagon, that it is supposed to be weighed upon, that such coal shall be put on again, before any attempt is made to weigh the coal that was last dumped.

Fifth.—That section third of the act of the Fifty-fourth General Assembly, relative to mines and mining, approved March 6, 1885, be amended, making it read as follows: Section 3. The owner, agent, or operator of any coal mine shall keep a sufficient supply of timber at the mine so that the workmen may at all times be able to properly secure the workings from caving in, and the owner, agent, or operator shall select and deliver all props and timber of proper lengths, to the rooms of the workmen when needed and required. If this section was amended as suggested I think that it would tend to advance the security of the man who works under ground, and lessen the danger to which he is continually exposed. In many instances the miner has to quit work on account of timber not being brought to him, after he has selected and told the driver that he needs them badly. It is not always the fault of the driver that the timber is not brought in. In many of the mines now in operation in this State, the coal is hauled a long distance, and there is in mines what the miners call partings (a place where coal cars are changed from one driver to another). In some mines there are two or three of those partings, and although the driver requested to bring in the timber delivers his message to the driver at the parting, who takes his trip of coal, and the timbers may be sent down from the top, yet the man for whom they are intended does not get them on account of them having to change hands so often. The miner has then to go out and again select timber, which has the same routine to go through, and may not reach him the second time. In some of the mines men are not required to select timber. All they have to do is to order them whatever length they are wanted, and if the first order does not reach them, all they have to do is to order a second or third time, if necessary, but they seldom fail to get them the day they are ordered, while under the system of selecting and ordering them they may lose them several days in succession. This amendment to section 3 would not in any way injure the companies, as they might have their timber (in most instances when it was being delivered)

put convenient to the mouth of the mines, thus enabling the workman who attends to the timber, to have any length required at hand, without any additional cost to the company.

Sixth.—Section 5 of an act relative to mines and mining, approved March 6, 1885, provides that approved safety catches be put on all cages used for the purpose of hoisting or lowering persons. Quite a number of catches have been put on cages during the year, but some of them are of very little, if any, use. Men who operate mines get the cheapest catches there are in the market, many of which are useless, and would not, in my opinion, prevent a cage from falling in case an accident was to happen and the rope to break. Those men who put such catches on their cages evidently do not care very much for the safety of the men who are in their employ. All they want is to put on something that complies with the law, in form, but not in reality. To make this section of practicable benefit to the miner, it should be so amended that the Inspector may be able to reject any catch that was put on a cage that would not answer the purpose for which the law intended it, namely, a security for those who are compelled to risk their lives daily by riding up and down on cages.

Seventh.—Section 1 of an act passed by the Fifty-fourth General Assembly and approved March 6, 1885, providing for an escape-shaft, should be amended so that operators working mines over two hundred feet deep would not be compelled to put in stairways in escape-shafts where there is an appliance that could be used to hoist men out of the mine in case an accident should happen to the main hoisting shaft. Shafts of this depth often have only an air-shaft in addition to the hoisting shaft, and if compelled to put in a stairway to comply with this section of the law, it would, in many cases, seriously injure the ventilation of the mine, and would not materially benefit the miners for the reason that they would not use this escape-shaft as a means of either ingress or egress, unless in case of an accident, and if, on such occasions, there were other appliances used that could be utilized at any time, such appliance should be all that the law would require for shafts of this depth. Such an amendment should be made in justice to the operator.

Eighth.—Section 5467 of the Revised Statutes of 1881 requires a traveling way cut around the bottom of the shafts,

sufficiently high and wide to permit persons passing from one side of the shaft to the other to do so without crossing either under or over the cage. This section should be amended by stating that the entrance to such passageway shall not be more than three yards from the bottom on either side of the shaft. This section of the law is taken advantage of because there is no limit as to distance. In some cases those manways are fifteen yards from either side of the bottom. In such places the cager is expected to cross under the cages when he goes from one side of the shaft to the other. Other men cross under the cages also, who would not if the manway was nearer the bottom of the mine.

Ninth.—The law should prohibit men from turning either rooms or entries ahead of the last break-through made from an air-course to an entry. In most instances where men are at work driving either entry or air-course, there is not any more air at the head or face of such workings than is needed by the men driving such places, and when men are put to work turning rooms beyond the last break-through, they deprive those in the narrow work of the air intended for them. The result is the men in the narrow work often are compelled to quit work on account of not having sufficient air to work upon.

VENTILATION BY FAN.

In my last report attention was called to the advantage of fan ventilation as against that by furnace. My experience, both as miner and Inspector, is, that economy in costs as well as in results is always on the side of the fan, and it has been my aim to introduce fan ventilation in preference to the furnace wherever it was possible to be done at anything near the first cost of the furnace. In the record of improvements, given elsewhere in this report, it will be seen that fans are rapidly taking the place of furnaces in this State. To such an extent are the fans being adopted that in no instance has a furnace been built where there was steam-power used, in or about the mines, and so satisfactory have the fans proven to those who have adopted them, that a return to the furnace would not be looked upon favorably. The first, and, also, greatest, advantage in the use of a fan lies in the additional security it affords to life in case of accidents in shaft mines.

In trying to enforce an act of the Fifty-fourth General Assembly, relative to escape shafts, I have experienced considerable difficulty with some operators that were ventilating their mines with furnaces. They held that they were complying with the law when they had such an outlet as an air shaft with a furnace at the bottom of it would afford. In such cases I would ask what material they intended to make their stairway out of to withstand the action of heated air constantly passing upward? or, in case of accident, where the only means of escape would be by the air shaft, and where every moment was valuable in saving life, how could men pass up to the surface in safety through the hot and poisonous gases filling the air shaft, where, in nineteen cases out of twenty, the fire in the furnace would have to be drawn before the bottom of the air shaft could be reached? Where a fan is used as a ventilator, no difficulty of this kind can exist. A wooden stairway can be erected in the air shaft, when such shaft is large enough to allow it without being detrimental to the ventilation of the mine, which, not being exposed to the heat of the furnace, can always be kept available, and nothing would stand in the way of reaching, speedily, the outside in case of an accident. The numerous accidents in the past few years in neighboring States are well calculated to bring the matter forcibly to the minds of all parties interested. Where life is at stake, too much care can not be exercised nor too many legislative enactments be thrown around the miner who toils under ground at his dangerous vocation.

In most shafts in this State the hoisting shaft is used for either the inlet or outlet of air; but I notice that operators of mines desire to have the main shaft the outlet or upcast wherever it is possible, so that the air coming up out of the mine will prevent the water (that is always found in a shaft) from freezing, and thereby save the expense of cutting the ice out of the shaft, which freezes along the guides and sides of the shaft to such an extent that it becomes almost impossible in cold weather to run the cages. Where a fan is used it is very easy to make the main shaft the upcast by simply reversing the fan. Where a furnace is used this can not be done, as the air always travels to it and can not be changed at a moment's notice throughout the entire mine the same as air supplied by a fan. In most of the mines of the State that are

ventilated by fans the air shafts are located near the main shaft, and the steam to run the fan is turned on from the boilers that create the steam for hoisting coal, thus saving the cost of a boiler to furnish steam for the fan and a man to attend it, making the cost of running a fan very small, leaving the only cost in connection with fan ventilation for mines in the first cost of the fan. This cost is but little in excess of the furnace, as the fan for ventilation of mines is being improved every year, making it more valuable as a ventilator for mines, and at the same time reducing the price for manufacturing. While at work on this report I have been furnished with a price-list of fans made in our own State that puts the fan in reach of every mine owner in the State. With those few remarks in favor of the fan as a ventilator, we will now proceed to discuss a few other subjects before giving a short account of each mine visited.

Among the improvements made since my last report are the following: Safety catches, twenty-one; escape shafts at mines that heretofore had none, eleven; air shafts, four; furnaces, four; fans erected, nine. All of these tend to show that the Inspector has not been idle, and, though he has many things to attend to, the work of improvement has gone steadily on.

NATURAL GAS

Has been found in some of the States east of ours. It has also been discovered in parts of Indiana. In other States it is rapidly taking the place of coal for fuel. In this State it has not been discovered in any place in sufficient quantities to seriously impair coal trade. In different parts of the State companies have been formed for the purpose of searching for this hidden treasure. What the result of their labors may be remains yet to be seen. If a permanent gas supply can be found in Indiana it will add much to the wealth of the State and materially injure the demand for coal.

CONDITION OF TRADE.

As before stated, trade has been remarkably good in Indiana during the past year, with the exception of a few months during the summer season. The demand for coal has never been

better than now. So great has it been that many companies were unable to meet the demands made upon them by their customers.

NEW RAILROADS

Completed into Indiana have had much to do with this increased demand for coal. The extension of the C. & I. C. Ry. from Yeddo to Brazil has enabled the coal companies to secure cheaper transportation for their coal into the Chicago markets, and aided them to get a better supply of flat-cars than formerly. The E. & T. H. R. P built a switch from Farmersburg to New Pittsburg, a distance of ten miles. This switch has opened a new field of coal hitherto undeveloped, which promises to be very extensive. The extension of the I. & E. R. R. from Washington to Northington, where it was connected with the T. H. & S. E., has given Southern Indiana an opportunity to get into the northern market, such as they never had before. In addition to those mentioned, there are a number of other railroad improvements made in the State of less importance that have aided in making the increased demand.

MINERS

Have also been in good demand, and some of our mine owners were compelled to visit our sister States of Ohio and Illinois in search of men.

STRIKES

Have been few. None of very great importance have taken place anywhere in the State. Of course, the State was not entirely free of them. The only one of any significance was at P. Ehrlich & Co.'s mine, south of Brazil, in Clay County. This one was caused by some of the men being discharged from the employ of the company on account of some petty offense. The men offered to arbitrate all grievances with the company, but they would not listen to the proposition of the men, and a strike was inaugurated, which lasted several weeks. It was finally settled, and all the men allowed to return to work. In my report last year I spoke of strikes and how they are to be deplored. I am still of the same opinion. I say to the operator and miner, avoid strikes. There may be momentary satisfaction gained through them for either of the interested parties,

but no practicable benefit. Therefore meet as friends, discuss your grievances, settle your difficulties without recourse to strikes, and in the end all will be benefited.

Mention was made in my last report of the prospects of a settlement on a plan for making yearly prices for mining coal in Indiana, Ohio, Illinois and other States. Such a plan was formed at Columbus, Ohio, February 23, 1886. The price for mining Indiana block coal was placed at eighty cents per ton, and the bituminous sixty-five and seventy-five cents per ton. This contract to go into effect May 1, 1886. In many places it was put in force, in others it was not recognized by either operators or men. In the block coal district the men have been governed by this scale, but it has not given very good satisfaction, as there was some disagreement about the height of coal that was to be paid at the rate of eighty cents per ton. The miners claim that coal four feet and over was to be paid at that price, and coal below that thickness was to be paid additional. The operators do not seem to understand the agreement that way. The consequence is the miners have not worked contented, as much of the coal now being worked in the block coal mines of Clay County is not over three feet thick. They have tried to settle this dispute by arbitration, but all efforts in that direction have failed, and at the last meeting held for the purpose of settling the question, it was referred to the national convention that will convene in Columbus, Ohio, February 1, 1887, when the difficulty will be settled, but whether in favor of the miner or against him no one can foretell. One thing is certain, the miner who mines the low coal is entitled to more pay per ton for it than the miner who mines coal that is four feet and over in thickness. And it is to be hoped that the men who meet at the coming convention will recognize the justice of the miners' claims and award them accordingly.

Before entering upon a short description of the mines, etc., let me say that the mines in every part of the State that have been in operation during the past year have all been undergoing improvements. I do not claim that all are good or up to the requirements of the law, but I know that changes for the better have been made in a great many places, and that the mines in this State are in better working condition than ever before. In some cases it was found necessary to file affidavits

against men who made no efforts to comply with the law. In one or two other cases I did not file affidavits because the Prosecuting Attorney could not be found. On the whole, my relations with the operators and miners have been agreeable and pleasant. When first appointed there seemed to be a feeling of dread of the Inspector existing among the miners in parts of the State. This feeling I have tried to dispel, and feel that it is to-day, in a great measure, done away with. To those that so kindly rendered me assistance in divers ways, I return my sincere thanks. To the miners in general I say, always assist the Inspector in the discharge of his duties, for whatever he accomplishes is for your benefit.

We will now consider briefly the location of the various mines, to whom they belong, the improvements made, and what is promised for the future.

CLAY COUNTY.

No. 3 MINE,

Owned by the B. B. Coal Co., located one and a half miles west of Cardonia, was worked out and abandoned January 15, 1886.

No. 5 MINE,

Owned by the B. B. Coal Co., located just west of No. 3. This mine was visited three times. On my first two visits the mine had not sufficient air in circulation for the number of men at work. The doors and breaks through were not given proper attention. In fact the mine seemed to be worked without any system. On my last visit I was pleased to find great improvements, and the work of improvement was still being pushed, a force of men being employed for that purpose.

ABBY MINE,

Owned by the B. B. Coal Co., successor of T. Watson & Co., is located one mile west of Cardonia. The tunnel spoken of in my last report is completed, and this company is now taking out coal from the top vein, where the great majority of the

men are now at work. This vein is being ventilated by the fan that is used in ventilating the bottom vein. By the use of an air shaft that was put down, near the face of the main entry, the air is allowed to come up through this shaft. When it reaches the top vein it is split and part of it taken on either side of the main entry. And finally it is allowed to return to the bottom of the hoisting shaft. The air is not as good in the top vein as it is in the bottom vein. But the general condition of the mine was fair on my last visit.

CHICAGO,

Owned by the B. B. Coal Co., located at Carbon. This mine was not worked from January 15 to September 20. There is about 130 men working in the mine at present, and the general condition of the mine is good. During the year they have put safety-catches on their cages.

MORRIS MINE,

Owned by the B. B. C. Co., located just north of Brazil, was worked out and abandoned August 1.

BARTLETT,

Owned by the B. B. C. Co., located one mile north of Brazil. Their dump buildings and engine house were burned down October 9. The company then decided to connect this mine with the Campbell and not rebuild.

CAMPBELL,

Owned by the B. B. C. Co., located three-quarters of a mile north of Brazil. This mine is in fair condition, except that part called Bartlett, which is in reality the Bartlett mine. This part of the works is ventilated by a separate fan from the one used to air the Campbell proper, and is poorly ventilated. The Superintendent of the company has promised to put in a good stairway, in the Bartlett, and use it as an escape shaft for this mine. During the year they have put safety-catches on their cages.

GARTSHERIE No. 1,

Owned by the B. B. C. Co., successor to Drew & Wasson, located on the north branch of the T. H. & I. R. R., one and a half miles north of Knightsville. After making the improvements that were considered necessary (spoken of in my last report) to give their employes the required amount of air, and finding that they were not sufficient, the air-shaft from the surface was enlarged down to the top vein, and an entirely new one was sunk from there to the bottom vein. The work was not completed on my last visit, but was being pushed, and when completed I think the mine will have plenty of good, pure air. The company put down an escape-shaft during the year. It is accessible from this mine and also Gart. No. 2. They also put safety-catches on their cages.

GARTSHERIE No. 2,

Owned by the B. B. C. Co., successors to Drew & Wasson, located one mile north of Harmony, on the Harmony Branch of the T. H. & I. R. R. Coal I, or top vein, is almost worked out in this mine, there being only fifteen men at work in it on my last visit, most of those working on pillars. On my last visit I found that although there were two fans used in ventilating this mine the air was very bad. Upon investigation it was found that the engine used in running the fan was not capable of doing the work intended, and that the air courses leading from the other fan were almost filled up with slate. The Bank Boss in charge of the mine promised to have the air courses cleaned, and I have the promise of the Superintendent of the company that the engine will be replaced by one capable of doing the work. There is a good traveling way from this mine into the escape-shaft, which was put down in Gart. No. 1 works. They have put safety-catches on their cages.

HANCOCK,

Owned by the B. B. C. Co., located three miles south of Knightsville, on the south branch of the T. H. & I. R. R. This mine is almost worked out, there being no coal in places and very bad roof in others; besides there is considerable water. The company put down a water shaft during the year. They expect to abandon the mine about April next. They have also put safety catches on their cages.

CRAWFORD MINE,

Owned by Crawford Coal Co., located one-half mile southwest of Gartsherie No. 1. This company has worked and abandoned the top vein, or Coal I, since my last report. They are now working the bottom vein exclusively, and have a large force of men at work. The air is generally good, although they are bothered at times with damp from an abandoned mine near by; their coal is good, and the general condition of the mine is good.

STAR MINE,

Owned by Zeller & Sigler, located one and one-half miles north of Harmony. This mine is almost finished. The company does not expect to operate it after the first of February, 1887. There is just a small force of men at work, and they are drawing pillars, and may finish the mine before the time designated.

PEANUT,

Owned by the Knightsville Block Coal Co., successor to Zeller & Sigler, located one-quarter of a mile southwest of Knightsville. This company has driven a tunnel from the bottom vein to the one above, and are now working about twenty men in Coal I. The general condition of the mine is good. Like many others, there are parts of it bad. They have put safety catches on their cages.

NICKEL PLATE,

Owned by the Jackson Coal and Mining Co., located one and a half miles north of Knightsville, on the north branch of the T. H. & I. R. R. This company is still working the two seams I and J; one is worked at night, the other in day time. They are ventilated by two fans—one for the top vein almost exclusively, while the other is used for ventilating parts of both veins. This is done by forcing the air down to the lower vein first, then letting part of it escape through small air shafts made for the purpose to the top vein. By this means there was too much allowed to go to the top vein, and while it was

pretty well ventilated, the men in the bottom vein did not have what the law required. I requested the bank boss to remedy this by not allowing any of the air to go to the top vein while the men in the bottom vein were at work. To do this it was found necessary to make quite a change in the system of ventilation. To make the contemplated change the boss proposes to bring the air to the top vein first, then bring it through a continuous air course past all these air shafts, and then, by means of another air shaft, to drop it down to the bottom vein, at or near the working face of the bottom vein. This plan is to be put in force when the bottom vein men are at work, and when the men are at work in the top vein the air is to be changed and forced to the bottom vein and allowed to come up again through these air shafts spoken of above. This plan, if carried out, will, in my judgment, make the desired improvement, and all parts of the mine will be well ventilated. For some time this company has not had the safety catches that were put on their cages last year in use. I called at the office of the company to ascertain the cause, and found that the catches they had been using were not giving satisfaction, and they had ordered other catches, and would put them on just as soon as they came from the foundry.

CENTENNIAL,

Owned by C. B. Reddie, located one and a quarter miles south of Brazil, is without an escape shaft, and proper attention is not given to the ventilation of the mines. Upon waiting on Mr. Reddie, for the purpose of asking him to get his mine up to the requirements of the law, I was told that he could not afford to go to so much expense, and that he would reduce the force of men that he was then employing until his mine did not come under the law.

PHOENIX,

Owned P. Ehrlich & Co., located five miles south of Brazil, on the south branch of the T. H. & I. R. R. At this mine the roof is bad, and it falls a great deal in the air courses and stops them up, in some cases almost completely. When I visited this mine last I found that this was one of the greatest difficulties they had to contend with in the ventilation of the mine. Coupled with this is the fact that the mine was opened without

any seeming knowledge of how a mine should be opened. The bank boss promised to keep a watchful eye over the air courses and keep them as well cleansed out as possible at all times, and to get the mine into such shape as to work it systematically. There was a traveling way made to the slope, just north of this mine, but it was closed on my last visit so that the men could not travel through it. The boss promised to put men at work immediately to clean it out. They have put safety catches on cages.

SOUTH SLOPE,

Owned by P. Ehrlich & Co., located about two hundred yards north of the Phoenix. This company has erected a new fan, but it is small and will not be adequate for the wants of the mine, if it is worked very extensively. The dump building was burned last year, and it was supposed that they would re-open the mine about January 1 of this year, but they did not resume operations until June.

NEWBURG,

Owned by P. Ehrlich & Co., located in the town of Newburg. This mine was shut down June 1 and reopened October 1. On my first visit to this mine this year great objection was made to the manner of ventilation, and after some consultation with the Superintendent of the company he agreed to change the current and bring it in near the face of the workings. This was fulfilled, and when I returned again I found they had opened a slope and had made it the inlet, and the men had plenty of pure air, and also a convenient place to go out and in.

WHEELER MINE,

Owned by Gounter & Croasdale, located just east of Newburg, is shut down. There was an air shaft put down at this mine in the spring, and one of the company who was then operating it promised to make some necessary improvements, but do not know whether they were made or not, as the mine was not in operation when I visited it the second time.

STAUNTON MINE,

Owned by Joseph Somners, located west of Newburg. When this mine was last visited it was found necessary to stop one entry, as it was quite a distance ahead of the air. There were some air courses which needed driving, and the boss promised to drive them immediately.

BURGHERVILLE,

Owned by the Gartscherie Coal and Mining Co., successors to Samuel Pryor, located one-half mile west of Newburg, on the line of the T. H. & I. R. R. This mine is now in good working order, the air being good, a nice escape shaft being made, and a safety catch on the cage.

NORTH MINE,

Owned by Benjamin Simpson, located two miles west of Carbon, on the I. & St. L. R. R. On my first visit to this mine I found there was poor air in it. After talking with the bank boss awhile regarding necessary improvements, I went away. When I returned again I found that Mr. Simpson had reduced his force of men so that his mine did not come under the jurisdiction of the mine laws, and since that time he has not increased the number of men worked, but has put safety catches on one of his cages.

PAW-PAW,

Owned by Morgan & Powell, located one-half mile west of Cardonia, on the north branch of the T. H. & I. R. R. This firm has erected a small furnace during the year and are now ventilating with it. The general condition of the mine was fair when last visited.

LITCHFIELD,

Owned by the Coal Bluff Mining Co., located just north of Carbon. The two seams are still being worked at this mine. There have been very few changes made here during the year. On my last visit to this mine I did not find as much air in circulation as there should be. I called at the office of the company and saw the Superintendent and he promised to so repair

the fan that it would produce enough air for the number of persons employed. I do not know whether this promise has been fulfilled or not, but have heard no complaints of any kind since my visit. They have put safety catches on their cages.

VANDALIA MINE,

Owned by Zeller & Sigler, located one and a quarter miles west of Centerpoint. This shaft was put down some years ago, but never worked any. The two veins, I and J, are worked here. The mine is ventilated by a fan. They have an escape shaft put down, but had no stairway in it when I was there last.

WATSON'S No. 1,

Owned by Gartsherie Coal & Mining Co., located four miles south of Brazil, on the south branch of the T. H. & I. R. R. This mine was opened October 1. Coal I is being worked. They have put down an escape shaft, but had no stairs in it when visited, but they promised to get them in right away; also, safety catches and covers on their cages. This mine is ventilated by a fan.

CHICAGO,

Owned by the Jackson Coal Co., located just east of the little town of Benwood, on the north branch of the T. H. & I. R. R. Coal J is worked, The mine is a new one, it being opened in July. It is thirty-seven feet deep. Ventilated by a fan.

DIAMOND, No. 2,

Owned by Zeller & Sigler, located four miles southeast of Knightsville, on the south branch of the T. H. & I. R. R. The company finished sinking this the latter part of October.

CLAY CITY SHAFT,

Owned by the Clay City Block Coal Co., located about half a mile north of Clay City. This mine is a new one, it being opened last September. This shaft is seventy-two feet deep. They had just started on the double partons when I was there.

DAVIESS COUNTY.

SULPHUR SPRINGS MINE,

Owned by Cable & Kaufman, located south of Washington one half mile. This mine is being worked out rapidly. They have nearly all the men at work on pillars, and have added all the work of the south branch mine to this one. The mine was visited three times during the year and was always found in fair condition. The greatest difficulty to contend with in the ventilation of this mine is the damp that comes from old and abandoned works that this mine is connected with, that were operated years ago.

SOUTH BRANCH,

Owned by Cable & Kaufman, located one-half mile south of Washington, was connected to the Springs mine, and is thus abandoned.

EUREKA,

Owned by Cable & Kaufman, located three-quarters of a mile southeast of Washington. This is an old mine and will be abandoned after this winter.

MAPLE VALLEY,

Owned by Cable & Kaufman, located two miles southwest of Washington. This mine is ventiled by a furnace, the main shaft being the down cast; there is a pile of slate-slack and sulphur taken out of the mine. It is just a little southeast of the main shaft, and when the wind comes from that direction it blows directly over the shaft and some of the smoke enters the mine and makes the air very obnoxious. With this exception the ventilation of mine is good.

No. 4 MINE,

Owned by Cable, Kaufman & Co., located two miles south of Washington. This is a new mine; it was opened last year, and upon being visited was short of air, but the company has

erected a new fan since then, and it was found on my last visit in good condition. It is worked on the double-entry plan, and there was good air in all parts of the mine, and there is a splendid slope for the men to go out and in by.

BUCKEYE,

Owned by the Cannel Coal Co., located at Cannelburg, on the line of the O. & M. R. R. At this mine two kinds of coal are worked, one being cannel coal and the other bituminous. This mine was found on both visits to be in pretty good condition. They had no safty catches on their cages, but Mr. Cable promised to put them on at once.

UNION No. 1,

Owned by Unity Coal Co., located half mile south of Cannelburg, was shut down and abandoned about March 1, 1886.

UNION No. 2,

Owned by the Mutual Mining Co., located just north of No. 1, was reopened by the present company, but is not working very many men. Like the Buckeye, they are working two kinds of coal. At present they are ventilating by natural draft.

WILSON'S,

Owned by Cable-Wilson Coal Co., located on the line of the O. & M. R. R. Since my last report the company has begun to operate this mine quite extensively. The coal is three feet six inches high, with a little slate in the center of the coal. The coal bins spoken of in my last report are completed, fourteen in all, each one holding 3,000 bushels of coal; they have also erected a fan. The mine is worked on the double-entry system. The bottom is very soft, and the mine was in good condition when last visited. They are also at work on a slope to be used for an escapement for the men. It will be completed about the middle of September.

DUBOIS COUNTY.

ROSEBANK MINE,

Owned by J. C. Futes, located three miles north of Huntingburg, on the Air Line Railroad. This mine was not running on my first visit, but on my return I found it running full time and pretty well ventilated.

BAROMAN'S,

Owned by Alexander Baroman, located just east of Huntingburg. On my first visit I found they had no artificial means of ventilation. As a consequence the ventilation was poor; no covers on the cages; neither had they safety catches on nor anything else. The bank-boss promised to erect a fan right away; also, to comply with the law in other respects. I allowed him plenty of time to do this work, and when I returned I found that the erection of a fan was the only improvement. When I asked why the other improvements had not been made, the bank-boss used abusive language. I then filed an affidavit against him for not having safety catches on his cages. The State won the suit.

FOUNTAIN COUNTY.

No. 2,

Owned by Woodruff, Trunkey & Co., located one mile west of Stringtown. This mine was reopened November 1, 1885. During the year they have put down an escape shaft and put safety catches on their cages. The ventilation of the mine is good.

No. 3,

Owned by Woodruff, Trunkey & Co., located half mile west of Stringtown; was abandoned April 1, 1886.

YEDDO MINE,

Owned by H. Porter & Co., located just north of Yeddo; was abandoned January 1, 1886.

McVEY'S MINE,

Owned by James McVey, located half mile east of Stringtown; was abandoned March 1, 1886, but McVey has opened another mine close to the old one. There is only a few acres of coal where new one is; it can not last long. He intends to ventilate with a small fan used at the old mine.

BUNKER No. 2,

Owned by T. Tyly, located one mile west of Stringtown. This mine was abandoned during the month of October, 1886.

 GREEN COUNTY.

ISLAND CITY No. 1,

Owned by Island Coal Company, located one and a half miles south of Linton, on a branch of the I. & V. R. R. This mine was visited twice, and was found in good condition. The only error was the lack of proper attention to doors and brakes-through. The Superintendent promises to give both more attention in the future.

No. 2 MINE,

Owned by Island City Coal Company, located one-half mile southeast of No. 1; was abandoned June 1, 1886.

PRICE'S MINE,

Owned by Dugger & Neil, located two miles west of Linton. This mine is a new one; was put down in August. They were just beginning the double partons when I was there first. It was put down by another firm and sold afterward to the present owners.

KNOX COUNTY.

 INDIAN CREEK MINE,

Owned by Indian Creek Coal Company, located one and a quarter miles south of Bicknell, on a branch of the I. & V. R. R., was visited twice. On my first visit I did not go into the mines, as the machinery was not in running order and there were no men in the mine. On my second visit all things were in splendid condition. They had put safety catches on their cages and a stairway in their air shaft, making a good escape shaft.

 WHITE RIVER MINE,

Owned by Wright & Curry, successors to Michael Aitkins & Co., located one mile northwest of Edwardsport. This mine was abandoned by Aitkins & Co. February 1; was reopened by the present company August 6, 1886. They are now working a small force of men. The condition of the mine was fair.

 OWEN COUNTY.

 LANCASTER MINES NOS. 1 AND 2,

Owned by the Lancaster Block Coal Co., located three and a half miles northeast of Clay City, on a branch of the T. H. & S. E. R. R. No. 1 was abandoned during the month of April. No. 2 is in good working order. They were at work on my last visit making a traveling way to No. 1, intending to make it the escape-shaft for No. 2. They have put safety-catches on their cages.

PERRY COUNTY.

 SIOUX No. 1,

Owned by the American Cannel Coal Co., located two and a half miles northeast of Cannelton. On visiting this mine the first time this year, it was found necessary to put in a furnace for the better ventilation of the mine. On returning I found they had sunk an air-shaft and built a furnace, thus making the ventilation good.

SIOUX No. 2,

Owned by the American Cannel Coal Co., located just a short distance from No. 1, was found on both visits to be in good condition.

WINDY CREEK,

Owned by Burgenroth Bros., located one mile up the Ohio River from Troy, was almost finished on my last visit. This company is only working a few men, and they expect to finish it this winter.

 PARKE COUNTY.

 No. 2,

Owned by the Parke County Coal Co., located at Rosedale. The dump buildings and engine house were destroyed by fire in June. The company did not rebuild, and consequently the mine was abandoned.

No. 3,

Owned by the Parke County Coal Co., located on a branch of the T. H. & I. R. R. This mine was visited twice, and found in fair condition. They had no safety catches on their cages, but promised to have them on by September 29.

No. 4,

Owned by the Parke County Coal Co., located one-half mile from No. 3, was visited twice, and found in good working order.

No. 5,

Owned by the Parke County Coal Co., located near Rosedale, is a new mine, being put down after No. 2 mine was abandoned. This mine is ventilated by a fan. The coal on the north side is mined by hand, on the south side by machinery. This company has no safety catches on any of their mines, but have purchased them, and promised to put them on all their mines within a week after the date of my first visit, but have not heard whether they put them on or not.

BLACK DIAMOND,

Owned by Stephens Coal Co., located one mile north of Carbon, on a branch of the I. & St. L. R. R. The fan erected at this mine last year has not given satisfaction, as it could not be run fast enough to ventilate the mine properly. In addition to this, proper attention was not given to breaks-through, doors and air courses, and the mine was on my last visit in very poor condition, but the man in charge had been there only a short time and was doing all he could to better the condition of the mine. I have been informed since my last visit that the mine was in pretty good order and being steadily improved.

BLAINE SHAFT,

Owned by the Brazil Block Coal Co., located one and a quarter miles northeast of Carbon, on a branch of the I. & St. L. R. R. During the year they have put safety catches on their cages and made an escape shaft, and when last visited was in good condition.

BLAINE SLOPE No. 2,

Owned by the Brazil Block Coal Co., located near Blaine Shaft, was in fair condition when last visited. They were working thirty-five men, with five thousand two hundred cubic feet of air in circulation per minute.

BLAINE SLOPE No. 3,

Owned by the Brazil Block Coal Co., located near No. 2 slope, was opened in June, and is now working twenty-two men. When visited last it was ventilated by natural draft, but the company intends to put in a furnace immediately.

NOTE.—Batty & Harrison's mine, mentioned in my last report, have not employed the required number of men to come under the mining law, and are not mentioned in this report.

 PIKE COUNTY.

 AYERSHIRE MINE,

Owned by D. E. Ingle, located about seven miles from Oakland City, on the Air Line R. R. This mine is poorly managed. They ventilate by a fan, but pay very little attention to break-through. When visited last was found to be in very bad condition. I intended to return November 1, but had not the time. They have raised their dump buildings and opened a new slope just over the old one. They are now making large quantities of coke. It is of good quality and they find ready sale for all they can make.

WHITMAN MINE,

Owned by C. Townsend, successor to C. O. Godfrey & Co., located about three miles east of Oakland City, on the Air Line R. R. This mine was visited twice and found in good condition.

HAZEL DELL MINE,

Owned by Stephen Betaman & Co., located three miles north of Petersburg, on the E. & I. R. R., was improved some during the year, but was still bad when visited last. Mr. Betaman promised to put in a furnace or fan by the first of November, but have not heard whether the promise was fulfilled or not. They have put down a slope during the year, and are now taking coal out of it instead of the shaft.

ROGERS' MINE,

Owned by Roger Bros., located about two miles north of Hazel Dell, was poorly ventilated when last visited, and yet they had required returning to what they call a furnace; but this air did not circulate through the mine as it should. This firm has put down a shaft a short distance from the drift now used. When completed they expect to abandon the drift they are now taking coal out of and use the shaft for hoisting coal. They also intend to erect a fan and ventilate with it.

 SULLIVAN COUNTY.

 PIONEER,

Owned by the Curriesville Coal Co., located one-half mile north of Shelburn, on the E. & T. H. R. R. On both my visits to this mine it was found in pretty good condition. They have put safety catches on their cages, and a stairway in the air shaft to make it answer for an outlet.

SHELburn, No. 1.

Owned by Shelburn Coal Co., located in Shelburn, has not been used for anything except pumping water since it was connected with No. 3 mine last year.

SHELburn, No. 2,

Owned by the Shelburn Coal Co., located a short distance south of No. 1, was found in fair condition. They have put safety catches on their cages. The other mine spoken of in my last report, owned by this company, has not, to my knowledge, worked at any time more than seven men during the year. Bunker Hill Mine, which was also mentioned in my report, has worked on a small scale this year.

LYONTON MINE,

Owned by the Lyonton Coal Co., located on the I. & I. S. R. R., five miles east of Sullivan. It is well ventilated, and during the month of June they put down an escape shaft. On my last visit the general condition was good.

DUGGER MINE,

Owned by Dugger & Neil, located on the line of the I. & I. S. R. R. This mine is well managed, and has always been found in fair condition. During the year this company has put down an escape shaft, and raised their dump buildings two feet higher.

NEW PITTSBURG MINE,

Owned by the Pittsburg Coal and Coke Co. This company has opened two new drifts, ten miles southeast of Farmersburg. They are ventilated by furnaces. The average height of the coal is six feet, of a soft nature. The roof is good and free from trouble. The company has built a number of houses and a store near the works. The coal is shipped by rail, the E. & T. H. having built a switch from Farmersburg out to the mines.

CARLISLE MINE,

Owned by Carlisle Coal Co., located north of Carlisle, was put down during the year. They have not commenced active operations yet, as they have just completed sinking.

 VIGO COUNTY.

FOUNTAIN No. 1,

Owned by Coal Bluff Mining Co., located at Fontanet, on the line of the I. & St. L. R. R. This mine has been worked on a small scale during the summer months, there being only enough men at work to supply the engines with coal, that stopped at Fontanet, and it was the intention of the company

to abandon it altogether. But since the fall trade began they have put more men to work, and on my last visit they were working about thirty-two men, and had connected this mine with No. 2; both mines are ventilated by one fan; they have put safety-catches on their cages.

FOUNTAIN No. 2,

Owned by Coal Bluff Mining Co., located about one-half mile northwest of No. 1. There are about one hundred men at work in this mine. The coal is mined by machinery. It is ventilated by the fan at No. 1. They have put safety catches on their cages.

SOUTH MINE,

Owned by Edgar Coal Co., located one-half mile southwest of Coal Bluff, on a switch extending from the I. & St. L. R. R., was visited three times during the year, and found on each visit in fair condition. There is a splendid fan here. There was some complaint made to me about doors being left open, but the boss promised me it should not occur again, and I have heard no more complaints since.

SEELEYVILLE MINE,

Owned by P. Ehrlich & Co., located at Seeleyville, on the T. H. & I. R. R. The ventilation is good. Complaints were made to me about safety catches not being on the cages. Since then they have put on safety catches and everything is in good condition.

KAY'S MINE,

Owned by Coal Bluff Mining Co., successor to Kay, Lang & Co. The present company got control of this mine November 1, 1885, and since that time operated it. The ventilation is not good; but the bank-boss promised me on my last visit to put in a new furnace.

EPPART MINE,

Owned by the Coal Bluff Mining Co., successors to W. Eppart, located about half a mile from Kay's, was reopened October 28, 1886. The general condition of the mine is poor. They promised to put in a furnace.

UNION MINE,

Owned by the Co-operative Coal Co., located one-half mile southeast of Fontanet, was shut down May 1, 1886, reopened August 1, 1886, was shut down again after running two weeks and is now idle.

VERMILLION COUNTY.

HAZEL BLUFF,

Owned by Sherkey Coal Co., located one-half mile northwest of Clinton. After completing their air shaft last year they erected a furnace. On both my visits this year I found plenty of air in circulation, but in the south entry the ventilation was poor on account of the air not being distributed right. The men in this entry were troubled with black damp (carbonic acid gas). The attention of the boss was called to this, and he promised to give it his immediate attention.

NORTON CREEK MINE,

Owned by the Norton Creek Coal Co., located three miles northwest of Clinton, on a switch built from the C. & E. I. R. R. The old mine was not in operation the day I last visited it; neither was the furnace fire built, but I went through the workings of the mine and found them in good condition. They have opened a small drift near the old one and the coal from both mines is dumped over one tipple. The small drift is ventilated by a furnace. They were opening a new mine about a quarter of mile from the old one, but I do not know whether it is in operation or not.

VANDERBURGH COUNTY.

INGLESIDE MINE,

Owned by John Ingle & Co., located on the banks of the Ohio River just west of the city of Evansville. The condition of this mine is good; a large quantity of air is in circulation, but

is not as pure as the air in new mines where there are no old workings to contend with. This mine has been in operation for twenty-five years. They have black damp to contend with. They have put safety catches on their cages.

SUNNYSIDE,

Owned by the Sunnyside Coal and Coke Company, successors to the Evansville Coal and Mining Company, located northwest of the city of Evansville. The mine was found in good condition on both my visits.

UNITY MINE,

Owned by the Unity Coal Company, located north of the city of Evansville, on the P., D. & E. R. R. The company put in a new exhaust fan at the bottom of the hoisting shaft, and it works splendid. This mine was, on my last visit, one of the best ventilated mines in the State. They have put safety catches on one of their cages, and the bank boss promises to put down an escape shaft soon as possible.

FIRST AVENUE,

Owned by the First Avenue Coal Company, located north of the city of Evansville. This mine has been improved during the year. On my last visit I found it in better condition than on any previous visit. They put safety catches on their cages.

ECHO MINE,

Owned by the Diamond Coal Company, successors to the Echo Coal and Mining Company, located northeast of the city of Evansville, was found in very bad condition. After considerable delay I succeeded in getting the company to sink an air and escape shaft. It was not completed on my last visit, but they were pushing the work ahead quickly as possible. When completed they will erect a fan over the shaft. This will greatly improve the condition of the mine.

The mine the Bill Road Coal Company started to sink was abandoned on account of it being both difficult and costly to sink through the quicksand, which is sixty feet thick where they started to sink.

WARRICK COUNTY.

STAR No. 2,

Owned by Lore & Augle, located one mile up the Ohio River from Newburg, was visited once. The mine was not in operation that day. I left intending to call again when it would be in operation; but the owners met with an accident, while rowing a boat, in which both were drowned. Since then the mine has been idle: hence by absence from it.

CHANDLIER MINE,

Owned by Menden & Hall, successors to M. M. Freed, located on the line of the L., E. & St. L. R. R., six miles southwest of Boonville, has been reopened after being idle since January 1, 1886. There is very little change since last year in the condition of this mine. The ventilation is good, but they have no escape shaft. One of the owners, Mr. Cox, promised to put down an escape shaft, and to put safety-catches on the cages. He was to let me know when this was done, but I have never heard from him since the promise was made.

No. 3,

Owned by Robert Lowder, successor to M. M. Freed, located one-half mile northeast of Chandlier, on the L., E. & St. L. R. R., was shut down during the winter. It was reopened by Mr. Louder in the latter part of October. I am unable to give any account of that mine, as it was not in operation on any of my visits.

DE FOREST,

Owned by Bettram Menden, located one-half mile east of No. 3, on the L., E. & St. L. R. R., was reopened in November, 1885, and operated until June of this year, and was again shut down; was visited a short time before it was stopped, and found in poor condition; in fact there "was" no air in the mine; I went to the owner, who lives in Evansville. He promised to

make all the necessary improvements upon returning. The mine was shut down and has not been reopened to my knowledge.

BOONVILLE,

Owned by Robert Goff, located one-half mile east of Boonville, on the L., E. & St. L. R. R., has very little air in circulation, is worked on a small scale, the coal is close to the surface, and Mr. Goff prefers sinking a hole down to the coal for air in preference to a fan or furnace.

FULLER MINE,

Owned by Robert Louder, located east of Boonville half mile. This mine was opened some years ago, but never worked to any extent. The present owner expects to develop the mine; ventilated by a jet at present. He intends putting up a fan.

Table Giving Name of Mines; also Name and Address of Owners of all Mines in Clay County that Employ Ten or More Men.

NAME OF MINE.	OPERATOR.	ADDRESS.	Kind of Mine.	Power Used.	KIND OF COAL.	Seam Worked.	COAL THICKNESS.		Depth from Surface in Feet.	Average No. of Men Employed.	HOW VENTILATED.
							Feet.	Inches.			
No. 5	Brazil Block Coal Co	Brazil, Ind	Slope	Steam	Block	I	3	75	90	Fan.	
Abbey	Brazil Block Coal Co	Brazil, Ind	Shaft	Steam	Block	I & J	3	20	100	Fan.	
Chicago	Brazil Block Coal Co	Brazil, Ind	Shaft	Steam	Block	I	3	80	135	Fan.	
Campbell	Brazil Block Coal Co	Brazil, Ind	Shaft	Steam	Block	I	3	106	300	Fan.	
Gart. No. 1	Brazil Block Coal Co	Brazil, Ind	Shaft	Steam	Block	J	3	109	125	Fan.	
Gart. No. 2	Brazil Block Coal Co	Brazil, Ind	Shaft	Steam	Block	I & J	3	120	275	Two fans.	
Hancock	Brazil Block Coal Co	Brazil, Ind	Shaft	Steam	Block	J	3	40	35	Fan.	
Crawford	Crawford Coal Co	Brazil, Ind	Shaft	Steam	Block	I	3	107	265	Fan.	
Star Mine	Zeller & Sigler	Knightsville.	Shaft	Steam	Block	I	3	100	90	Fan.	
Pennat	Knightsville Coal Co	Knightsville.	Shaft	Steam	Block	I & J	3	100	20	Fan.	
Nickle Plate	Jackson Coal Co.	Brazil	Shaft	Steam	Block	I & J	3	102	400	Two fans.	
Centennial	C. B. Reddic	Brazil	Shaft	Steam	Block	I	3	70	22	Furnace.	
Phoenix	P. Ehrlich & Co	Turner P. O	Shaft	Steam	Block	I	3	40	75	Fan.	
South Slope.	P. Ehrlich & Co	Turner P. O	Slope	Steam	Block	I	3	30	25	Fan.	
Newburg.	P. Ehrlich & Co	Turner P. O	Shaft	Steam	Bituminous	L	6	75	70	Fan.	
Wheeler	Gaunter & Crousdale	Brazil	Shaft	Steam	Bituminous	L	9	62	22	Fan.	
Staunton	John Sunners	Turner P. O	Shaft	Steam	Bituminous	L	6	38	40	Nat'ral draft.	
Burcherville	Gart. Coal and Mining Co.	Brazil	Shaft	Steam	Bituminous	L	3	60	17	Fan.	
North.	Wm. Simpson	Carbon	Shaft	Steam	Block	I & J	3	60	45	Nat'ral draft.	
Paw-Paw	Morgan & Powell	Carbonia.	Slope	H pwr	Block	I	3	20	32	Furnace.	
Litchfield.	Coal Bluff Mining Co	Carbonia.	Shaft	Steam	Block	I & J	3	80	150	Fan.	
Vandalia	Zeller & Sigler	Knightsville.	Shaft	Steam	Block	I & J	3	37	110	Fan.	
Watson's No. 1.	Gart. Coal Co	Brazil	Shaft	Steam	Block	I	3	52	55	Fan.	
Chicago.	Jackson Coal Co.	Brazil	Shaft	Steam	Block	J	3	37	50	Fan.	
Diamond	Zeller & Sigler	Knightsville.	Shaft	Steam	Block	J	3	69	10		
Clay City	Clay City Coal Co	Clay City	Shaft	Steam	Block	I	4	72	10		

Table Giving Name of Mines; also Name and Address of Owners of all Mines in Daviess County that Employ Ten or More Men.

NAME OF MINE.	OPERATOR.	ADDRESS.	Kind of Mine.	Power Used.	KIND OF COAL.	Seams Worked.	COAL THICKNESS.		Depth from Surface in Feet.	Average Number of Men Employed.	HOW VENTILATED.
							Feet.	Inches.			
Sulphur	Cable & Kaufman	Washington	Shaft.	Steam	Bituminous	1	4	60	90	Furnace & fan	
Eureka	Cable & Kaufman	Washington	Slope.	Horse	Bituminous	1	3	48	22	Furnace.	
Maple Valley	Cable & Kaufman	Washington	Shaft.	Steam	Bituminous	L	6	74	125	Furnace.	
No. 4	Cable & Kaufman	Washington	Shaft.	Steam	Bituminous	L	4	70	65	Fan.	
Buckeye	Cannel Coal Company	Washington	Shaft.	Steam	Bitu. & Cannel.	1	4	100	120	Fan.	
Union No. 2	Mutual Mining Company	Cannelburg	Shaft.	Steam	Bitu. & Cannel.	1	5	96	15	Jet.	
Wilson's	Wilson Coal Company	Washington	Shaft.	Steam	Bituminous	6	96	65	Fan.	

Table Giving Name of Mines; also Name and Address of Owners of all Mines in Dubois County that Employ Ten or More Men.

NAME OF MINE.	OPERATOR.	ADDRESS.	Kind of Mine.	Power Used.	KIND OF COAL.	Seams Worked.	COAL THICKNESS.		Depth from Surface in Feet.	Average Number of Men Employed.	HOW VENTILATED.
							Feet.	Inches.			
Rosebank	J. C. Fates	Huntingburg	Drift.	Horse.	Bituminous	L	4	6	50	25	Furnace.
Banoman	A. Banoman	Huntingburg	Shaft.	Steam	Bituminous	4	.	.	17	Fan.

Table Giving Name of Mines; also Name and Address of Owners of all Mines in Fountain County that Employ Ten or More Men.

NAME OF MINE.	OPERATOR.	ADDRESS.	Kind of Mine.	Power Used.	KIND OF COAL.	Seams Worked.	COAL THICKNESS.		Depth from Surface in Feet.	Average Number of Men Employed.	HOW VENTILATED.
							Feet.	Inches.			
No. 2	Woodruff & Trunkley	{ 58 Dearborn St } Chicago, Ill. }	Shaft.	Steam	Bituminous	L	6	6	106	125	Fan.
McVey's	James McVey	Snoddy's Mills	Drift.	Horse.	Bituminous	L	4	6	50	25	Fan.
Bunker No. 2	Thomas Tyley	Snoddy's Mills	Shaft.	Steam	Bituminous	L	4	6	80	30	Fan.

Table Giving Name of Mine; also Name and Address of Owners of all Mines in Greene County that Employ Ten or More Men.

NAME OF MINE.	OPERATOR.	ADDRESS.	Kind of Mine.	Power Used.	KIND OF COAL.	Seam Worked.	COAL THICKNESS.		Depth from Surface in Feet.	Average No. of Men Employed.	HOW VENTILATED.
							Feet.	Inches.			
Island City	Island Coal Co.	Linton	Shaft.	Steam	Bituminous	L	5	9	60	150	Fan.
Price's	Dugger & Neil	Dugger	Shaft.	Steam	Bituminous	L	5	6	76	25	Fan.

Table Giving Name of Mine; also Name and Address of Owners of all Mines in Knor County that Employ Ten or More Men.

NAME OF MINE.	OPERATOR.	ADDRESS.	Kind of Mine.	Power Used.	KIND OF COAL.	Seam Worked.	COAL THICKNESS.		Depth from Surface in Feet.	Average No. of Men Employed.	HOW VENTILATED.
							Feet.	Inches.			
Indian Creek.	Indian Creek Coal Co.	Bicknell.	Shaft.	Steam	Bituminous . . .	K	4	95	65	Fan. Furnace.	
White River	Wright & Curry	Edwardsport . . .	Drift.	Horse	Bituminous . . .	L	5	60	25		

Table Giving Name of Mine; also Name and Address of Owners of all Mines in Owen County that Employ Ten or More Men.

NAME OF MINE.	OPERATOR.	ADDRESS.	Kind of Mine.	Power Used.	KIND OF COAL.	Seam Worked.	COAL THICKNESS.		Depth from Surface in Feet.	Average No. of Men Employed.	HOW VENTILATED.
							Feet.	Inches.			
Lancaster No. 2	Lancaster Coal Co.	Clay City, Clay Co	Shaft.	Steam	Semi-Block	I	4	60	120	Fan.	

Table Giving Name of Mine; also Name and Address of Owners of all Mines in Perry County that Employ Ten or More Men.

NAME OF MINE.	OPERATOR.	ADDRESS.	Kind of Mine.	Power Used.	KIND OF COAL.	Seam Worked.	COAL THICKNESS.		Depth from Surface in Feet.	Average No. of Men Employed.	HOW VENTILATED.
							Feet.	Inches.			
Sioux No. 1.	A. C. C. Co.	Cannelton	Drift.	Horse	Semi-Block	F	2	6	150	18	Furnace.
Sioux No. 2.	A. C. C. Co.	Cannelton	Drift.	Horse	Semi-Block	F	3	3	150	65	Furnace.
Windy Creek.	Burgenroth Bros.	Troy	Shaft.	Steam	Bituminous	G	3	.3	140	12	Furnace.

Table Giving the Names of Mines; Also Name and Address of Owners of All Mines in Parke County That Employ Ten or More Men.

NAME OF MINE.	OPERATOR.	ADDRESS.	Kind of Mine.	Power Used.	KIND OF COAL.	Seam Worked.	COAL THICKNESS.		Depth from Surface in Feet.	Average No. of Men Employed.	HOW VENTILATED.
							Feet.	Inches.			
No. 3.	Parke County Coal Co.	Rosedale	Shaft.	Steam	Semi-Block	I	4	.	65	125	Fan.
No. 4.	Parke County Coal Co.	Rosedale	Shaft.	Steam	Semi-Block	I	4	.	80	130	Fan.
No. 5.	Parke County Coal Co.	Rosedale	Shaft.	Steam	Bituminous	I	5	6	80	100	Fan.
Black Diamond	Stephens Coal Co.	Carbon, Clay Co.	Slope.	Steam	Block	I	3	10	38	85	Fan.
Blaine Shaft	Brazil Block Coal Co.	Brazil	Slope.	Steam	Block	I	3	6	40	125	Fan.
Blaine Slope No. 2.	Brazil Block Coal Co.	Brazil	Slope.	Steam	Block	I	4	.	30	35	Furnace.
Blaine Slope No. 3.	Brazil Block Coal Co.	Brazil	Slope.	Steam	Block	I	4	.	30	22	Natural draft.

Table Giving the Names of Mines; Also Name and Address of Owners of All Mines in Pike County That Employ Ten or More Men.

NAME OF MINE.	OPERATOR.	ADDRESS.	Kind of Mine.	Power Used.	KIND OF COAL.	Seam Worked.	COAL THICKNESS.		Depth from Surface in Feet.	Average No. of Men Employed.	HOW VENTILATED.
							Feet.	Inches.			
Ayrshire	D E. Ingle	Oakland, Gibson County	Slope.	Steam	Bituminous	L	4	8	85	150	Fan.
Whitman's	C. Townsend	Whitman	Shaft.	Steam	Bituminous	L	4	4	50	50	Fan.
Hazeldell	S. Bettanan & Co	Petersburg	Slope.	Steam	Bituminous	L	6	6	40	35	Natural.
Roger Bros.	Roger Bros.	Washington.	Drift.	Steam	Bituminous	L	7	6	80	75	Furnace.

Table Giving the Names of Mines; Also Name and Address of Owners of All Mines in Sallican County That Employ Ten or More Men.

NAME OF MINE.	OPERATOR.	ADDRESS.	Kind of Mine.	Power Used.	KIND OF COAL.	Seam Worked.	COAL THICKNESS.		Depth from Surface in Feet.	Average No. of Men Employed.	HOW VENTILATED.
							Feet.	Inches.			
Pioneer.	Currieville Coal Co.	Shelburn	Shaft.	Steam	Bituminous	L	5	6	248	45	Fan.
Shelburn No. 2	Shelburn Coal Co.	Shelburn	Shaft.	Steam	Bituminous	L	5	6	248	45	Fan.
Lyonton	Lyonton Coal Co	Sullivan.	Shaft.	Steam	Bituminous	L	6	6	70	38	Furnace.
Dugger	Dugger & Neil	Dugger	Shaft.	Steam	Bituminous	L	5	4	70	115	Fan.
New Pittsburg	Pittsburg Coal and Coke Co	New Pittsburg	Drift.	Horse	Bituminous	L	5	6	60	60	Furnace.

Table Giving Name of Mines; also Name and Address of Owners of all Mines in Vigo County That Employ Ten or More Men.

NAME OF MINE.	OPERATOR.	ADDRESS.	Kind of Mine.	Power Used.	KIND OF COAL.	Seam Worked.	COAL THICKNESS.		Depth from Surface in Feet.	Average No. of Men Employed.	HOW VENTILATED.
							Feet.	Inches.			
Fountain, No. 1	Coal Bluff Mining Co	Fontanet	Shaft	Steam	Bituminous	L	9	9	62	32	Fan.
Fountain, No. 2	Coal Bluff Mining Co	Fontanet	Shaft	Steam	Bituminous	T	5	9	60	100	Fan.
South Mine.	Edgar Coal Co	Coal Bluff	Shaft	Steam	Bituminous	L	5	7	60	120	Fan.
Seeleyville	P. Ehrlich & Co	Turner P. O.	Shaft	Steam	Bituminous	L	7	9	96	60	Fan.
Kay's	Coal Bluff Mining Co	Fontanet	Slope	Steam	Bituminous	L	9	7	45	55	Furnace.
Eppart	Coal Bluff Mining Co	Fontanet	Drift	Steam	Bituminous	L	9	7	40	45	Natural.
Union	Co-operative Coal Co	Fontanet	Shaft	Steam	Bituminous	T	5	9	60	40	Jet.

Table Giving Name of Mines; also Name and Address of Owners of all Mines in Vermillion County That Employ Ten or More Men.

NAME OF MINE.	OPERATOR.	ADDRESS.	Kind of Mine.	Power Used.	KIND OF COAL.	Seam Worked.	COAL THICKNESS.		Depth from Surface in Feet.	Average No. of Men Employed.	HOW VENTILATED.
							Feet.	Inches.			
Hazell bluff.	Sherley Coal Co	Clinton	Drift	Horse	Bituminous	L	4	4	90	30	Furnace.
Norton Creek.	Norton Creek Coal Co	Clinton	Drift	Horse	Bituminous	L	6	4	40	250	Furnace.

Table Giving Name of Mines; also Name and Address of Owners of all Mines in Vanderburgh County That Employ Ten or More Men.

NAME OF MINE.	OPERATOR.	ADDRESS.	Kind of Mine.	Power Used.	KIND OF COAL.	Seam Worked.	COAL THICKNESS.		Depth from Surface in Feet.	Average No. of Men Employed.	HOW VENTILATED.
							Feet.	Inches.			
Ingleside	J. Ingle & Co.	Evansville.	Shaft	Steam	Bituminous	K	4	4	283	100	Fan.
Sunnyside	Sun Coal and Coke Co.	Evansville.	Shaft	Steam	Bituminous	K	4	4	256	35	Fan.
Unity	Unity Coal Co.	Evansville.	Shaft	Steam	Bituminous	K	4	4	257	50	Fan.
First Avenue	First Avenue Coal Co.	Evansville.	Shaft	Steam	Bituminous	K	4	4	260	35	Fan.
Echo	Diamond Coal Co.	Evansville.	Shaft	Steam	Bituminous	K	4	4	257	20	Natural draft.

Table Giving Name of Mines; also Name and Address of Owners of all Mines in Warrick County That Employ Ten or More Men.

NAME OF MINE.	OPERATOR.	ADDRESS.	Kind of Mine.	Power Used.	KIND OF COAL.	Seam Worked.	COAL THICKNESS.		Depth from Surface in Feet.	Average No. of Men Employed.	HOW VENTILATED.
							Feet.	Inches.			
Star, No. 2	Lore & Angle	Newburg.	Shaft	Steam	Bituminous	K	4	4	104	17	Furnace.
Chandler	Menden & Hall	Evansville.	Shaft	Steam	Bituminous	K	4	4	85	25	Furnace.
No. 3	R. Lowden	Boonville	Shaft	Steam	Bituminous	K	5	6	85	20	Furnace.
De Forest	Bettram Menden	Evansville.	Shaft	Steam	Bituminous	K	6	6	95	20	Furnace.
Boonville	Robert Goff	Boonville	Shaft	Steam	Bituminous	K	6	6	45	18	Natural draft.
Fuller	R. Lowden	Boonville	Shaft	Steam	Bituminous	K	6	6	45	19	Jet.

Below is given tables showing the number of men that work in mines; also the number of mines in each county. The increase or decrease of either men or mines is caused by the opening or abandoning of the large mines. There is some changes in the small mines, but not enough to make any change in the general result, some being abandoned and some being opened in almost every county, leaving the number of small mines about the same, and the number of men working in them about the same as last year :

NUMBER OF MINES IN EACH COUNTY.

COUNTIES.	Number of Mines.	Number of Men.
Clay	33	2,600
Daviess	14	530
Dubois	11	55
Fountain	13	220
Green	8	200
Gibson	3	5
Knox	3	92
Martin	3	15
Owen	6	135
Perry	16	140
Parke	15	650
Pike	17	239
Sullivan	12	325
Spencer	8	30
Vigo	14	475
Vermillion	4	290
Vanderburgh	5	240
Warrick	15	150
Warren	5	15
Total	208	6,406

PROPOSED AMENDMENTS TO THE MINING LAWS.

Drafted by the Committees Appointed by the Knights of Labor and Federated Association of Miners and Mine Laborers of the State of Indiana, and Recommended to the General Assembly of the State for Enactment.

SECTION 1. Be it enacted by the General Assembly of the State of Indiana, That any person who, or a firm, company or corporation which issues or circulates any scrip, token, check, draft or certificate of indebtedness, payable otherwise than in money, or designed, intended, or calculated, or used as money, or in lieu of the lawful money of the United States, or pays the wages in goods or supplies through the intervention of scrip or any other evidence of indebtedness, shall be deemed guilty of a misdemeanor, and upon conviction shall be fined not more than one thousand dollars nor less than five hundred dollars, at the discretion of the court, and in default of payment of such fine and costs for the space of ten days the defendant shall be sentenced to imprisonment not more than one year nor less than six months in the county jail.

Be it enacted by the General Assembly of the State of Indiana, That section 2 of an act entitled "An act providing the means for securing the health and safety of persons employed in coal mines," and approved March 6, 1885, be amended to read as follows:

SEC. 2. Break-throughs or airways shall be made in every room at least every forty-eight feet, and all break-throughs or airways, except those last made near the working faces of the mine, shall be closed up and made air-tight by brattice, trap-doors or otherwise. The doors used on hauling roads, in assisting or directing the ventilation of the mine, shall be attended to in working hours by trappers, so that they can not be left standing opened, nor shall any driver or other person by prop or otherwise cause the same to stand open. Double entries shall be driven properly adjoining each other and as near parallel thereto as possible, with nine feet of a pillar left between them to secure the roof from falling on account of

weight of the superincumbent strata forming the roof over the coal seam. Break-throughs shall be made every forty-eight feet between entries.

That section 3, of the act of the Fifty-fourth General Assembly, relative to miners and mining, approved March 6, 1885, be amended by striking out the words "when selected," making the section read as follows: Section 3. The owner, agent or operator of any coal mine shall keep a sufficient supply of timber at the mine, and that the agent, owner or operator shall deliver all props, caps and timbers of proper lengths to the rooms of the workmen when needed and required, so that the workmen may at all times be able to properly secure the workings from caving in.

Be it enacted by the General Assembly of the State of Indiana, That wherever two-thirds of the miners of a mine determine to place a check-weighman on the tippie the one-third be compelled to pay their quota, and the same can be collected as per workman wages law.

That the mining laws of the State of Indiana be printed on one sheet and one side of good, strong paper, and delivered by Mine Inspector to owner, agent or operator of all mines coming under the jurisdiction of the mine law, and they shall frame and place the same inside glass, hanging them in a conspicuous place at the mine so that all persons employed in and around the mine may be conversant with the law.

Section 1. Be it enacted by the General Assembly of the State of Indiana, That all owners, agents or operators of any coal mine shall pay their employes all the wages due and payable every week after the week in which the work was done, and all payments shall be made on Saturday, in the lawful money of the United States.

Sec. 2. Any owners, agents or operators of any coal mine violating any of the provisions of this act shall be deemed guilty of a misdemeanor, and upon conviction shall be fined in any sum not less than one hundred dollars per day until payments be made. Said fine shall go into the school fund of the county in which the violation is made.

Sec. 3. All acts or parts of acts supplied or inconsistent herewith, in the mining law, are hereby repealed.

Amended: That Section 5480 of the Revised Statutes of 1881, and amended by the act of March 3, 1883, be so amended

by striking out the words from and after the word "appropriated" to the word "used," inclusive, and insert: That on the scales being tested by the Mine Inspector and found incorrect that each owner, agent or operator whose scales are found incorrect, upon conviction thereof, shall be fined in the sum of not less than one hundred dollars and not more than five hundred dollars, at the discretion of the Court. Upon the inspection being made and the scales found incorrect the Mine Inspector shall at once institute suit. Any mine scales in use and found incorrect, the owner, agent or operator shall be fined for any day or part of a day not more than one hundred dollars or less than twenty-five dollars they dump coal before the scales are adjusted.

Be it enacted by the General Assembly of the State of Indiana:

SECTION 1. That it shall be the duty of the Mine Inspector to examine all places defined in the mining law of the State of Indiana and see that a sufficient supply of air is passing through break-throughs in rooms and entries.

SEC. 2. That the downcast or ingress of air for the ventilation of mines shall be conducted on the latest scientific principles from the mouth of the downcast shaft or slope to that part of the mine in actual working operation, and there shall be a sufficient amount of air pass through the nearest break-through to the working faces of mine room and entry. Any person violating the provisions of this section shall be deemed guilty of a misdemeanor and upon conviction shall be fined in any sum not less than one hundred dollars nor more than five hundred dollars.

SEC. 3. That it shall be the duty of owner, agent or operator to furnish all information to Mine Inspector, according to section 5476, R. S., approved May 1, 1879, so that he can fulfill the requirements of his office. Any person violating the provisions of this section shall be deemed guilty of a misdemeanor and, upon conviction, shall be fined in any sum not less than one hundred dollars nor more than five hundred dollars.

SEC. 4. That it shall be the duty of the retiring Mine Inspector to turn over to his successor all records, statistics, papers and reports connected with the office in order that they may be preserved.

SEC. 5. All laws and parts of laws in conflict herewith are hereby repealed.

Be it enacted by the General Assembly of the State of Indiana, That any person, firm, company or corporation in operating coal works shall not run his or their mine or mines, or allow any agent or lessee to run it more than eight hours in the twenty-four for a day's work, the same to constitute a day's work for all employed in and around the mine or mines. Any person, firm, company or corporation violating this act or part thereof, shall be fined not less than two hundred dollars nor more than five hundred dollars, and in default of payment ten days after the decision of the Court to be incarcerated in the county jail not less than six months nor more than twelve months.

WHEREAS, An emergency exists for the immediate taking effect of these acts, the same shall be in force from and after their passage.