

State inspector of coal mines reports

Section 38, Pages 1111 - 1140

These reports of the Kansas State Mine Inspector mostly concern coal mining, though by 1929 the scope of the reports broadens to include metal mines. The content of individual reports will vary. The reports address mining laws and mining districts; industry production and earnings; fatal and non-fatal accidents; accident investigations and transcripts of oral interviews; labor strikes; mine locations; mining companies and operators; and proceedings of mining conventions. The reports document the political, economic, social, and environmental impacts of more than seventy years of mining in southeastern Kansas.

Creator: Kansas. Inspector of Coal Mines

Date: Between 1884 and 1956

Callnumber: SP 622 K13

KSHS Identifier: DaRT ID: 210191

Item Identifier: 210191

www.kansasmemory.org/item/210191

KANSAS
HISTORICAL
SOCIETY



State inspector of coal mines reports

TENTH ANNUAL REPORT.

115

and industrious miner; also knew he was subject to those fits. Mr. Goodman should not have been allowed to work in any part of the mine alone. If he had been working with a partner or some one else, it is the opinion of the Inspector that he would not have lost his life as he did.

At the Kansas & Texas Coal Company's mine No. 23, on May 14, Joe Comiskey, a miner, 19 years of age, was badly crushed by falling slate. It was reported his injuries were painful but not serious, and that he was recovering.

At the Wear Coal Company's mine No. 2, Henry Cression, a miner, aged 24, met with a fatal accident while shot-firing. Henry Cression was a Frenchman, two years in this country, and was mining coal and shot-firing at the time he was killed. He leaves a wife and two children. Upon being notified of the accident, Inspector started at once for the mine, though he was in Leavenworth at the time, and made a careful examination of the room and place where Cression was found dead, accompanied by John Williams, the other shot-firer, George Bacon, Daniel Miller, and John Kirkwood. The place where Henry Cression was found smothered was upon first south entry off fourth south back entry off main west. Mr. Cression was found by John Williams, the other shot-firer, in the third room back from face of slant entry; distance room was driven up from entry was 131 feet; from face of room to last break-through it was 35 feet. Mr. Williams stated to the Inspector that in his judgment Mr. Cression had been in the room about two hours, basing his judgment upon the amount of work that had been done, and that when he found him his lamp was still burning, though almost out for want of oil; upon examination, no marks were found on the body of Mr. Cression to show that he had been shot. Mr. Geo. Bacon stated to the Inspector that he helped to wash Mr. Cression, and that he did not see any marks upon the body. The miner who worked in this room had prepared two shots for the shot-firer to fire; one was tamped, and the other was a little damp and he left it for the shot-firer to tamp. This shot was drilled straight in the face to a horseback. The drill hole was seven feet four inches deep, and was all of five feet on the solid; no chance for the shot to throw out the coal. Indications showed plainly that the shot-firer squibbed both shots and lit them; back shot missed fire, and this shot that was straight in the face went off, and the powder wasted itself on a slip a couple of feet from the drill hole and did not as much as break the tamping in the needle hole. Shot-firer Henry Cression must have rushed right back to fire the missed shot, not being able to tell which shot went off, and, while examining and looking, inhaled and was overcome by the gases of the



burned powder, and fell down and smothered. As proof that he had gone back, the squib was in needle hole of back shot ready for lighting. Also, the Inspector was informed by Mr. Williams, the other shot-firer, that Mr. Cression always made it his plan, where any shots missed, to run right back into the smoke and try to fire the missed shot, and that he came very near being killed three times before by going back too quick, shots going off while he was going into the room or working-place to look for them. Mr. John Kirkwood, mine boss, stated to the Inspector that upon learning that Mr. Cression was taking such risks while at work he (Mr. Kirkwood) told him that he was taking too much risk, and he would have to put another man in his place. Mr. Cression begged Mr. Kirkwood to let him go on, as he would not take the same risks again, as he was poor and wanted to make a little money. After some discussion of the matter, Mr. Kirkwood consented to try him again, with the above results.

At mine No. 6 belonging to the same company, Thos. Phillips, aged 45, of Pittsburg, a miner, had his leg broken from a fall of slate at face of his room, while mining down a piece of coal; when coal fell, over slate came with it, striking him on the leg and breaking it.

At the Western Coal and Mining Company's mine No. 2, Louis Vingro, a shot-firer, met with a fatal accident, between the hours of six and nine o'clock on July 3, 1897. When found he was still alive, but died a few minutes after he was taken on top. Inspector visited the scene of the accident on Monday morning, to learn the cause as far as possible. Upon arriving at the mine the Inspector made an examination of the working-place, accompanied by Mr. James Gardner, mine boss of No. 7, Mr. Philip Raser, mine boss at No. 2, and Mr. W. M. Foster, the shot-firer who was at work in the mine when Louis Vingro was killed. Mr. Foster was the man who first found his buttty shot-firer, and he assisted the Inspector in every way to ascertain how Mr. Vingro met with the accident. The following are the facts as found by the Inspector, after a careful investigation of the same: The room in which he was killed is the fifth room off of fourth east entry off seventh south entry off of the main west. Upon examination of room and place, I find face of room 25 feet from last cross-cut; there were three shots prepared for the shot-firer to fire; two of these shots were at the face of the room, and one 28 feet from face of room where he was making a break-through upon left side of room. Everything showed plainly that Mr. Vingro prepared and squibbed ready for firing, and that he had lit the two shots at face of room. One of these shots went off just as soon as he lit the squib, and the whole of the shot was blown out and scattered along the right rib of the room for at least 20 feet, knocking out the squibs that had been lit in the face of the



State inspector of coal mines reports

TENTH ANNUAL REPORT.

117

room, as they showed that they had been lit and the fire knocked off of them. Indications showed plainly that this shot that went off killed Louis Vingro. The flesh was forced up his right arm to the shoulder; his arm broken in three places; his jaw-bone broken upon the right side of his face, a hole in the right side of his neck, and a hole in the right side of his head, and the whole of the right side of his body scratched with small pieces of coal and scorched with the fire from the shot, showing plainly that the shot went off just as soon as he lit it, and before he had time to get away from it; force of the shot blew the body 16 feet away from where the shot was fired. The outside shot had four squibs in ready for firing, but had never been lit. When Mr. Foster found him he was still alive and sensible but unable to speak, as stated to the Inspector. Mr. Foster asked him how it happened, and he tried to speak but could not state one word. He was placed in a mine-car and taken out of the mine, and died soon after he was on top in engine-room. Upon examination, a little gas was found in needle hole of shot at face; also a little gas was found at back of drill hole of shot that had been fired, showing plainly that this shot in drill hole contained gas before it was fired. Indications showed that in squibbing this hole a little powder fell from the end of the squibs at the out end of the needle hole, and that he lit the inside shot at face of room first, and when he put his lamp to the needle hole to light the squibs in the second shot at face he must have lit the gas in the end of needle hole, and the small particles of spilled powder flashed the exposed end of the squib in the needle hole, and at that very moment, without any chance to get away, the squibs fired the shot. This may not have been the case, but all indications showed that it was, for he had received the force of the shot all on one side, and that was his right side, as though he had just put his lamp to the squibs to light them, and that he had never got outside to light the outside shot which had been already squibbed; and in addition, Mr. Louis Vingro was one of the most practical shot-firers in the state, and had been firing for this company for the last six years; but as this was Saturday evening, and the Fourth of July was going to be celebrated that evening, he was in a hurry to get through with his work, and had overlooked and did not examine the needle hole to see whether there was gas in it or not before squibbing, and in his hurry squibbed and then started to light, with the above results. The Inspector was satisfied that this man had fired hundreds of similar shots, and, had he noticed that the needle hole contained gas, would have lit his gas squibs and then placed them in the needle hole; and as these squibs do not blaze they would not have ignited the gas which is supposed to be the cause of the shot going off so quick.



At mine No. 2 belonging to the same company, Fred E. Pyle, driver, met with an accident upon August 7, by a loaded mine-car passing over him, dislocating right hip and lacerating his right leg, exposing the knee cap.

At mine No. 2 belonging to the same company, Joe Bell, aged 23, a miner, met with a serious accident by a fall of slate, which broke his back, and it is generally supposed that he will be a cripple for life from the results.

At mine No. 5 belonging to the same company, at Yale, Charles Larson, aged 33, met with a fatal accident by a fall of slate, on Friday morning, May 7. The Inspector at once started from Topeka for Yale, and got there on Monday morning. Mr. Roberts, mine boss, had gone to Osage City with the man who had been killed, his body being shipped there for burial. I visited the working-place, accompanied by Robert Penman, and after a careful examination of the same I found the following: Charles Larson worked in fourth south off main west entry. Larson belonged at No. 4 shaft of same company, and on this day was working in his butty's place. This man had gone to Kansas City on a visit. In working off a shot of coal that had been fired upon the straight rib of the entry, which relieved a rock from a slip that ran across the entry upon an angle of about 45 degrees, this rock had been loosened by last brushing shot, which was within four yards of face. Mr. Larson went to work without noticing this loose rock, and as he mined the coal down he was relieving and loosening the rock, and when the last of the coal was mined down the rock fell upon him, killing him instantly. The rock was 20 inches thick in the middle, $5\frac{1}{2}$ feet wide on north end, and $2\frac{1}{2}$ feet wide on the south end. It would probably weigh three tons, and sloped favorably to fall from the slip, and had he noticed it he would have propped it or pulled it down.

At mine No. 7 belonging to the same company, A. McCormick, aged 29, met with a slight accident by a fall of slate, but was not considered serious.

C. Wilson, aged 19, driver, working in the same mine, while driving met with a slight injury by a car passing over his foot, but was not considered very serious.

Geo. Douglas, aged 21, a miner, at work in the same mine, met with an accident while mining from falling coal, but was not considered serious.

At the A. Bell Coal Company's mine No. 1, at Coalvale, J. McLean, aged 50, miner, met with an accident by falling coal, while mining, which was not considered serious.

Also, Harry Jones, aged 46, miner, working for the same company,



received a light accident by falling coal, while mining, but was not considered serious.

At the Mt. Carmel Coal Company's Osage City mine No. 10, Ed. Hulsuple, a driver, met with an accident by car jumping track, but was not considered very serious.

At mine No. 23 belonging to the same company, Eusebo Pollo, miner, met with a slight accident by a fall of slate.

At mine No. 22 belonging to the same company, L. B. Cole, blacksmith, met with an accident while shoeing a horse. Horse kicked him and broke his leg.

At mine No. 24 belonging to the same company, James Brown, a day man, met with an accident. He fell down the shaft, but from some unknown reason was not seriously hurt. The mine was being worked double shift, cleaning up the shaft. Brown was top man on the night shift, and about five o'clock in the morning he pulled off a car of dirt, and from the time he left the cage to empty the car of dirt and returned the horse had pulled the cage about four feet above the landing, and as Brown came running back with the empty car he ran headlong into the shaft, falling a distance of about forty feet, receiving a few slight bruises and his left arm sprained.

At Miller Bros. Coal Company's mine No. 1, of Mulberry, Joe Peace, miner, met with a fatal accident, by being struck on the head by a piece of timber falling down shaft. This accident occurred in a new mine, located on the K. C. F. S. & M. railroad about two miles north of Mulberry. Joseph Peace was an old and careful miner. At the time of the accident the Inspector was in Leavenworth. The accident was not thought to be fatal, but Mr. Peace died in about two days after being hurt. The cause of the accident was as follows: Mr. Miller, owner of the mine, with Mike Smith, mine boss, and Joseph Peace, were on the bottom discussing some work in connection with the shaft. Top man was letting down the tub, and in drawing back the truck the dump block was loose, and had not been noticed, and it fell into the shaft. The top man hallooed, "Look out, below!" All on the bottom thought it was the tub coming back, as that was the usual signal given when sending down the tub. All stepped to one side; the block struck upon a bunting and glanced to one side, and struck Joseph Peace upon the head, crushing his skull. Mr. Peace was unconscious from the time he was hurt until he died. The depth of the shaft is 76 feet. The top man stated that before he had time to think the accident was done. Everything for the usual safety upon the top of the new shaft was provided for. The dump block that fell was supposed to be nailed, but from constant use had become loose, and was not noticed by any of the workmen. Had the top man had



State inspector of coal mines reports

120

INSPECTOR OF COAL-MINES.

the presence of mind to have hallooed "Look out for falling timbers!" the accident might not have occurred, as the men could have passed under where coal had been taken out; but they were not expecting falling timber and thought it was the tub.

At the Leavenworth Coal Company's mine No. 1, of Leavenworth, Thos. Mohan, miner, met with a fatal accident by a fall of slate at face of room in front of roadway. Room located off seventh east entry off first south entry off main west entry—room No. 3. At the time of the accident he was working with his brother, Wm. Mohan. He had worked for this company for the last 16 years, and was considered one of the best workmen and one of the most practical miners in the employ of the company. He was sober and industrious, but dull of hearing at times. The Inspector visited the place of accident, accompanied by Mr. Carr, and Mr. Grant Parker, mine boss of that division of the mine, and talked with the miners who helped to take Mr. Mohan out from under the slate; also gathered all the information available from the miners in connection with the place or room before the slate fell and killed Mr. Mohan. Miners at work in the next room stated to the Inspector that the room had been working and was dangerous all day; also, the miners stated that they had been working for the last two weeks very steady and hard, and they had taken up more of the bottom than was customary in that part of the mine, and in so doing their timbers were short for use in that place. Inspector asked the mine boss if at any time in the last few days Wm. or Thos. Mohan had asked him for longer timbers or asked any of his drivers or other parties authorized to furnish timbers, or for any change of timber other than the usual timber used in that part of mine. Mr. Grant Parker, mine boss, stated, in answer to the Inspector's questions, that neither Wm. nor Thos. Mohan had asked for any different timbers, nor ever made known to him that the room was dangerous. The coroner's jury brought in a verdict that Thos. Mohan met his death from the lack of having timber of sufficient length to properly timber and make his room secure; but from the general face of the testimony as learned by the Inspector, Mr. Thos. Mohan and his brother were overanxious to obtain coal, and by taking up heavy bottom it was easier mined, and they had allowed their place to become heavy before they properly timbered it; but, as stated by all of the witnesses, the room was well timbered at the time of accident.

At penitentiary mine, known as the state mine, located at Lansing, a non-fatal accident occurred upon September 15 to a cage load of men, while being lowered into the mine by engineer John Flint. As the cage was nearing the bottom of the shaft, by mistake he pulled

State inspector of coal mines reports

TENTH ANNUAL REPORT.

121

the reverse lever around, and before he could change the same the cage struck the bottom of the shaft, injuring the convicts upon the cage. This is a first-motion engine, and a very large drum is used. Usually, as a cage is nearing the bottom, the engineer works the steam against his engine so as to land lightly on top and bottom. He must have got control of his engine just before the cage struck the bottom, or the convicts would have all been killed. Mr. Flint, the engineer, has been hoisting for over six years at the penitentiary mine and at Brighton, near by, and has always been considered exceptionally cool and safe. He has hoisted under wardens Case, Chase, Lynch, and Landis, and never met with an accident of this kind before. Just as soon as the accident occurred, to show the coolness of Mr. Flint and his presence of mind, he walked over to the other engine-room, took hold of that engine, and lowered Mr. John Gray, superintendent, into the mine, that he might learn how badly the men were hurt that went down on the cage at the other shaft. It was made very plain to the Inspector, from all sources, that Mr. Flint's mistake was of the hand and not of the head, and was purely an accident. The men who were injured were all taken out at once and taken to the hospital and a convict nurse detailed to each one of them, and the doctor at once attended to all their sprains and bruises, and they received the very best of care until they were well.

TABLE OF FATAL AND NON-FATAL ACCIDENTS DURING THE YEAR 1897.

1. December 13. J. H. Durkee Coal Company, Cherokee county, mine No. 1 (new). HENRY COMBS, age 54, resided at Weir City; married; miner; employed at mining; cause of accident, fall of slate; broke leg above ankle.
2. Hamilton & Braidwood Coal Company, Cherokee county, mine No. 1. WM. SPENCE, age 50, resided in Missouri; married; miner; employed at mining; cause of accident, fall of coal; leg broke. Time lost, 40 days.
3. October 18; died same date. K. & T. Coal Company (W. H. Barrett, lessee), Cherokee county, mine No. 18. JOS. GOODMAN, age 26, resided at Weir City; single; miner; employed at mining; cause of accident, epileptic fit.
4. May 14. K. & T. Coal Company (W. H. Barrett, lessee), Cherokee county, mine No. 23. JOE COMISKEY, age 19, resided at Weir City; single; miner; employed at mining; cause of accident, fall of slate.
5. July 23; died same date. Wear Coal Company, Crawford county, mine No. 2. HENRY CRESSON, age 24, resided at Kirkwood; married; miner; employed at shot-firing; cause of accident, suffocation.
6. September 28. Wear Coal Company, Crawford county, mine No. 6. THOS. PHILLIPS, age 45, resided at Pittsburg; married; miner; employed at mining; cause of accident, fall of rock.
7. Wear Coal Company, Crawford county, mine No. 5. WM. STANLIC, age 28, resided at Pittsburg; driver; employed at driving; cause of accident, fell off trip. Time lost, 35 days.



8. Mt. Carmel Coal Company, Crawford county, mine No. 5. JOHN MAFFEE, resided at Chicopee; single; miner; employed at mining; cause of accident, burned with powder. Time lost, 20 days.
9. Mt. Carmel Coal Company, Crawford county, mine No. 5. PAUL LEVER, resided at Chicopee; single; miner; employed at mining; cause of accident, burned with powder. Time lost, 20 days.
10. Mt. Carmel Coal Company, Crawford county, mine No. 5. JAMES FARRELL, resided at Chicopee; married; shot-firer; employed at shot-firing; cause of accident, burned while lighting shots. Time lost, 25 days.
11. July 3; died same day. Western Coal and Mining Company, Crawford county, mine No. 2. LOUIS VINGRO, age 32, resided at Fleming; single; shot-firer; employed at shot-firing; cause of accident, premature explosion.
12. Western Coal and Mining Company, Crawford county, mine No. 2. FRED PYLE, age 22, resided at Fleming; single; cause of accident, loaded car. Time lost, 75 days.
13. Western Coal and Mining Company, Crawford county, mine No. 2. JOS. BELL, age 23, resided at Fleming; single; miner; employed at mining; cause of accident, fall of slate broke his back.
14. May 7; died same day. Western Coal and Mining Company, Crawford county, mine No. 5. CHAS. LARSON, age 33, resided at Yale; single; miner; employed at mining; cause of accident, fall of slate.
15. Western Coal and Mining Company, Crawford county, mine No. 7. A. MCCORMICK, age 29, resided at Yale; married; miner; employed at mining; cause of accident, fall of slate. Time lost, 60 days.
16. Western Coal and Mining Company, Crawford county, mine No. 7. C. WILSON, age 19, resided at Yale; single; driver; employed at driving; cause of accident, car caught foot. Time lost, 15 days.
17. Western Coal and Mining Company, Crawford county, mine No. 7. GEO. DOUGLAS, age 21, resided at Yale; single; miner; employed at mining; cause of accident, falling coal. Time lost, 30 days.
18. A. Bell Coal Company, Crawford county, mine No. 1. J. McLEAN, age 50, resided at Coalvale; married; miner; employed at mining; cause of accident, falling coal. Time lost, 12 days.
19. A. Bell Coal Company, Crawford county, mine No. 1. HARRY JONES, age 46, resided at Coalvale; single; miner; employed at mining; cause of accident, falling coal. Time lost, 12 days.
20. February 3. Mt. Carmel Coal Company, Osage county, mine No. 10. ED. HULSUPLE, resided at Osage City; single; mule driver; employed at driving; cause of accident, car jumped track. Time lost, 12 days.
21. February 18. Mt. Carmel Coal Company, Osage county, mine No. 23. EUSEBO POLLO, resided at Osage City; miner; employed at mining; cause of accident, fall of slate. Time lost, 50 days.
22. July 7. Mt. Carmel Coal Company, Osage county, mine No. 22. L. B. COLE, resided at Osage City; blacksmith; employed at shoeing horse; broken leg. Time lost, 50 days.
23. November 6. Mt. Carmel Coal Company, Osage county, mine No. 24. JAS. BROWN, resided at Osage City; top man; employed as dumper; cause of accident, fell down shaft. Time lost, 40 days.
24. October 20; died October 22. Miller Bros. Coal Company, Crawford county, mine No. 1. JOS. PEACE, age 50, lived at Mulberry; married; miner; employed at mining; cause of accident, hit on head by falling timber.



State inspector of coal mines reports

TENTH ANNUAL REPORT.

123

25. April 21. Central Coal and Coke Company, Crawford county, mine No. 9. ED. SONER, resided at Nelson; miner; employed at mining; cause of accident, fall of slate. Time lost, 60 days.
26. September 28. Leavenworth Coal Company, Leavenworth county, mine No. 1. THOS. MOHAN, age 30, resided at Leavenworth; single; miner; employed at mining; killed by fall of slate.
27. Chappell Coal Company, Osage county, mine No. 3.
28. Burlingame Coal-Mining Company, Osage county, mine No. 1.
29. Labor Exchange, Branch 223, Osage county, mine No. 1. SERAPHIN REYNAUD, age 27, resided at Osage City; single; miner; employed at mining; cause of accident, fall of slate. Time lost, 36 days.
30. Home-Riverside Coal-Mining Company, Leavenworth county, mine No. 2. "Colored," resided at Leavenworth; miner; employed at mining; cause of accident, burnt.
31. September 15. Penitentiary mine, Leavenworth county, mine No. 1. F. M. CLOUD, age 24, resided at penitentiary; convict; employed at mining; accident happened while descending into shaft.
32. September 15. Penitentiary mine, Leavenworth county, mine No. 1. E. W. BURGE, age 27, resided at penitentiary; convict; employed at mining; accident happened while descending into shaft.
33. September 15. Penitentiary mine, Leavenworth county, mine No. 1. LEWIS WORTHEN, age 19, resided at penitentiary; convict; employed at mining; accident happened while descending into shaft.
34. September 15. Penitentiary mine, Leavenworth county, mine No. 1. BERT PALMER, age 23, resided at penitentiary; convict; employed at mining; accident happened while descending into shaft.
35. September 15. Penitentiary mine, Leavenworth county, mine No. 1. GEO. WHITE, age 21, resided at penitentiary; convict; employed at mining; accident happened while descending into shaft.
36. September 15. Penitentiary mine, Leavenworth county, mine No. 1. ANDREW LACROSSE, age 18, resided at penitentiary; convict; employed at mining; accident happened while descending into shaft.

The casualties during the year 1897 were: Killed, 7; injured, 29.



TABLE OF FATAL AND NON-FATAL ACCIDENTS, AND COAL PRODUCTION FROM 1880 TO DECEMBER 31, 1897.

Office No.	Year ending.	Casualties.		Number of annual report.	Name of Mine Inspector.	Total tons produced (short tons).	Total value of coal.	Average price per ton.	Average number of days worked.	Average number of men employed.	Number of tons produced for each fatal and non-fatal accident.		Total number of casualties.
		Killed.	Injured.								Killed.	Injured.	
1	1880 ¹					550,000	\$715,000 00	\$1 30					
2	1881 ²					750,000	1,012,300 00	1 35					
3	1882 ²					750,000	975,000 00	1 30					
4	1883 ¹					900,000	1,152,000 00	1 28					
5	1884 ¹	3	7	1st	E. A. Scammon.	1,100,000	1,375,000 00	1 25			366,666	157,142	10
6	1885 ²	9	20	2d	John R. Braidwood.	1,440,057	1,770,270 00	1 23		4,175	160,006	72,002	29
7	1886 ²					1,350,000	1,620,000 00	1 20					
8	1887 ²	7	22	3d	G. W. Findley.	1,570,079	2,188,110 00	1 40			224,297	71,367	20
9	1888 ²				John T. Stewart.	1,700,000	2,550,000 00						
10	1889 ²	12	4	4th	John T. Stewart.	2,112,166	3,126,005 00	1 48		5,956	176,013	528,041	16
11	1890 ²	8	20			2,516,054	3,170,870 00	1 30	2 10	4,323	314,506	125,802	28
12	1891 ²	13	35	5th		2,753,722	3,007,375 00	1 31	2 22	6,201	211,824	78,678	48
13	1892 ²					3,007,276	3,954,568 00	1 31½	2 08	6,559			
14	1893 ²	15	61	6th	A. C. Gallagher.	2,881,931	3,960,331 00	1 37½	1 47	9,891	192,128	47,244½	76
15	1891 ²	26	53	7th	A. C. Gallagher.	3,611,214	4,899,774 00	1 33½	1 64	10,088	138,888	68,136	79
16	1895 ²	10	42	8th	Bennett Brown.	3,190,843	3,590,141 00	1 12½	1 61	9,021	319,084	75,973	52
17	1896 ²	12	25	9th		3,191,748	3,227,367 00	1 01½	1 70	8,807	265,979	127,669	37
18	1897 ²	6	30	10th	Geo. T. McGrath.	3,298,806	3,527,582 42	1 07	1 52½	8,699	549,467½	109,893½	36
	Totals.					36,671,806	846,431,683 42						

1. Production of coal and average price per ton made from U. S. geological survey, from 1880 to 1884.

2. One report made for two years.

3. No report made. Statistics for that year taken from U. S. geological survey.

* Explosion at mine No. 2 at Frontenac. No record made of loss of life, but forty-four lives were lost.

The average number of days worked for 1897 is taken from the four largest coal-producing counties in the state. The reason for this low average may be attributed to mines that load nothing but commercial coal, reducing the number of days worked by mines that load railroad coal.



STRIKES.

During the month of July, 1897, the miners of Cherokee and Crawford counties were very seriously discussing the advisability of suspending work and coming out upon a sympathetic strike, for the purpose of helping their fellow working men who were at that time on a strike in the East and struggling for better wages. Every one admitted that the struggle in the East was a just one, for they had been reduced from time to time until they were working for starvation wages. The result was, the calling of two or three delegate meetings of the miners of Cherokee and Crawford counties, for the purpose of discussing this matter, and finding out how the miners of both counties felt; after a great deal of discussion, and two delegate meetings, they came to the conclusion that they had grievances of their own, and this was the time to bring them before the operators, and right them if it was possible to do so, as the operators were getting a good price for their coal, and the miners felt that they ought to be paid more; also, they wanted a reduction of 50 cents per keg on powder, and semi-monthly pay; also pay for moving dirt, and a uniform wage for underground day men, and that was to be \$2 per day, and some other local matters which they felt ought to be settled. The result was, the delegate convention elected an executive board, and instructed them to notify the coal companies of Cherokee and Crawford counties of their grievances, and ask the operators to meet with them and see what could be done to make matters satisfactory to the miners before any hasty action was taken; and the result was, as the operators had had all the strike they wanted a few years ago, and many of them had not got over it yet, this was *vice versa* with the miners. So a meeting of the operators and executive board was finally arranged for August 6, 1897, at Pittsburg. This meeting resulted in an adjournment to August 14, 1897, when the operators and executive board met again. After a lengthy discussion *pro* and *con*, an agreement and contract were reached which the Inspector believes proved beneficial to both operators and miners. The following is a copy of the minutes of each meeting and the contract:

PITTSBURG, KAN., August 6, 1897.

A meeting of the executive board of the miners of Crawford and Cherokee counties and the mine operators in this district was called to order in city hall by chairman of the executive board, Geo. Wallace, at two o'clock P. M. Geo. Wallace was elected chairman, and A. B. Kirkwood secretary.



The following companies and operators were represented by the following parties at said meeting: The Mt. Carmel Coal Company, by C. J. Devlin, Henry Wilson, and Robert Fletcher; the Central Coal and Coke Company, by David Mackey; the Western Coal and Mining Company, by A. K. Craig; the Wear Coal Company, by A. B. Kirkwood; the Durkee Coal Company, by J. H. Durkee; the Pittsburg & Midway Coal Company, by Jno. T. Morrison and S. H. Lanyon; the Weir Brothers Coal Company, by A. J. Weir; the Graham Coal Company, by James Graham; the Weir City Coal Company, by Joseph Bennett; the Hamilton & Braidwood Coal Company, by Wm. Hamilton, sr.

The following companies were not represented at the meeting: The South-western Coal and Improvement Company, Arnott & Lanyon, the Scammon Coal Company, the Schwab Coal Company, the Kansas Commercial Coal Company (Fuller mine), the Kansas & Texas Coal Company.

The miners of the two counties were represented by the following executive board: Geo. Wallace, as chairman, Alexander Vanderbeck, W. H. Tidey, John Manning, and Wm. Kelley.

Geo. Wallace, after being elected to the position of chairman of the meeting, proceeded to state the following grievances, in behalf of the miners of Crawford and Cherokee counties, and asked at the hands of the operators their consideration:

First.—Semi-monthly pay-days.

Second.—Reduction in price of powder to \$1.50 per keg, and change of grade in some instances.

Third.—Uniform price of \$2 per day for men underground; also uniform price for entry work and pay for gobbing dirt.

Fourth.—That all coal mined in the district shall be weighed and paid for on a mine-run basis at a rate of 60 cents per ton the year round.

After Mr. Wallace had stated the concessions asked for in behalf of the miners, the operators were invited to discuss the same. The various propositions were discussed in an informal manner in behalf of the operators by Mr. Hamilton, Mr. Mackey, and Mr. Devlin. It was the universal opinion of the operators represented at the meeting that no reduction on the price of powder could be made, but that each company felt willing to allow its miners the privilege of designating what brand or grade of powder they preferred using.

A motion was made by Mr. Devlin that Mr. Mackey, Mr. Hamilton and Mr. Craig be appointed a committee of three from the operators to meet an equal number of the executive board and figure out a settlement of the grievances under discussion, if possible; said motion, however, failed to receive a second, and was therefore not put to the meeting.

After an informal talk by Mr. Devlin, rehearsing the whole situation here, the operators agreed with the executive board that they would allow the miners to choose what grade and quality of powder they would use; the price to remain at \$2; also, agreed to pay the miners semi-monthly, and \$2 per day for all day work underground, and that the operators agree in the meantime to use their best endeavor to have a full representation of all the operators in the district at a meeting to be held at same place on Saturday, August 14, at two o'clock P. M., for the purpose of making a final settlement of the demands of the miners of 60 cents per ton on a mine-run basis. It was also asked on behalf of the operators that the executive board endeavor to be empowered by the miners to arrange with the operators for a final settlement at this meeting.

After some more informal discussion, the meeting adjourned until the Saturday above mentioned. It was also understood and agreed by the operators, that



State inspector of coal mines reports

TENTH ANNUAL REPORT.

127

if for any reason a full representation of their number was not present at the meeting to be held on the 14th, those who did attend would be empowered to make a final settlement of existing grievances.

GEO. WALLACE, *Chairman*.

A. B. KIRKWOOD, *Secretary*.

AUGUST 14, 1897.

The adjourned meeting of the executive board of the miners of Crawford and Cherokee counties and mine operators in this district was called to order at seven o'clock P. M. in the parlors of the Stilwell hotel.

The following companies were present and represented as follows: The Mt. Carmel Coal Company, by C. J. Devlin, Henry Wilson, and Joseph Fletcher; the Central Coal and Coke Company, by Geo. Mackey; the Western Coal and Mining Company, by A. K. Craig; the Southwestern Coal and Improvement Company, by Ira Flemming; the Pittsburg & Midway Coal Company, by Jno. T. Morrison and Henry Lanyon; the Wear Coal Company, by F. E. Wear and A. B. Kirkwood; the Graham Coal Company, by James Graham; the Hamilton & Braidwood Coal Company, by Jno. R. Braidwood.

The following companies were not present or represented: The Kansas & Texas Coal Company, the Kansas Commercial Coal Company, the Scammon Coal Company, the Weir City Coal Company, the Schwab Coal Company, the J. H. Durkee Coal Company, Arnott & Co., the Pittsburg Coal and Coke Company.

The miners were represented by the following executive board, said members working for the following companies: Geo. Wallace, chairman, working for the Central Coal and Coke Company; John Manning, the Western Coal and Mining Company; Thomas Flynn, the Mt. Carmel Coal Company; Alexander McKillop, the J. H. Durkee Coal Company; Alexander Vanderbeck, the Graham Coal Company; J. C. Fogle, the Scammon Coal Company.

Geo. Wallace, chairman of the executive board, called the meeting to order, A. B. Kirkwood, of the Wear Coal Company, acting as secretary.

After the meeting had been called to order, Mr. Devlin, of the Mt. Carmel Coal Company, proceeded to make a talk relating to Mr. Ryan of the United Mine Workers of Illinois trying to get the miners of this district to engage in a sympathy strike. He asserted that Mr. Ryan had been associated with Mr. Conners, of the miners' state board of Illinois, and that Mr. Conners has been in the pay of some of the large companies of that state, and drew the inference that Ryan was probably no better than Conners, and was here for the purpose of benefiting the operators of northern Illinois and Iowa, to the detriment of the interest of the miners of Crawford and Cherokee counties, should they engage in a sympathy strike. He also stated that Ryan had advised the miners of Illinois, on the first of June of this year, that they accept a reduction of twenty-four per cent. and wished that Ryan had only been present at this meeting, so he could have faced him with the assertion that he made.

Mr. Flynn, of the executive board, then made a talk along the lines of a settlement, and hoped that one could be reached at this meeting, stating that it was not the desire of the miners to precipitate a strike, and that the executive board is fully empowered to make a settlement.

Mr. Wear then stated that the Kansas & Texas Coal Company was not represented at the meeting, although they had been asked to be present, and he understood that they had not been represented in the delegate convention that had chosen the executive board, and that, in his opinion, further time should be

State inspector of coal mines reports

128

INSPECTOR OF COAL-MINES.

given, so as to compel the attendance of the Kansas & Texas Coal Company, and that their men should be forced to have a representation on said executive board; in reply to which, Mr. Flynn, of the executive board, said that no attention should be paid to the Kansas & Texas Coal Company; that they had not been in the habit of attending meetings of this character, and that any agreement that should be reached by the other companies the Kansas & Texas Coal Company would be compelled to coincide in.

Mr. Tidey, of the executive board, said that at a delegate convention the miners of Nos. 20 and 37 had agreed that they would be governed by the decision of the balance of the men, as represented by the executive board.

Mr. Flemming, of the Southwestern Coal and Improvement Company, then stated that his company was not represented and they had no representation on the executive board.

In reply to this, Mr. Manning stated that his company was represented by two or three delegates at the delegate convention at which the executive board was chosen. Mr. Manning also stated that the Kansas & Texas had a representative from mines 23 and 37 at the delegate convention at which the executive board was chosen.

Some remarks were then made by Mr. McKillop, of the executive board, concerning the condition of the miners in the two counties, and calling attention to last paragraph of the minutes of the previous meeting, in which it was agreed by the operators that they would be fully empowered to make a settlement at this meeting.

Some discussion was entered into by Mr. Manning, of the executive board, and Mr. Braidwood, of the operators, as to the number of tons of coal that could be produced per keg of powder.

After much desultory discussion, the question was propounded by the executive board to the operators, if they were prepared to settle the matter; in reply to which Mr. Braidwood, of the operators, claimed that only one side of the question had been presented to the miners, and asked for further time, in order that he might place the situation from an operator's standpoint before his men, and suggested that a new delegate convention be called, based on a representation of one delegate for every fifty miners employed; said delegation to include, in addition, said executive board.

This argument was met by Mr. Wallace, saying that the executive board was the result of the representation of the character asked for by Mr. Braidwood.

Some further talk was then made by Mr. Flemming, Mr. Braidwood, and Mr. Wear, that no formal complaint had been made by their men, and they were not aware of any grievances existing, and that they preferred settling a difficulty with their own men.

It was then moved by Mr. Braidwood that the question of settlement be deferred for one week, and that the miners of each company elect a delegate for each fifty men employed, and that they meet with the present executive board, together with as full a representation of the operators as could be secured, on next Saturday, for the purpose of settling existing demands; this motion to be voted on by the operators only. Mr. Wallace, chairman of the meeting, refused to entertain the motion, claiming that the present board was fully empowered and authorized to make any settlement that might be determined on with the operators at this meeting.

Motion was then made by Mr. Braidwood that a price of 54 cents a ton for mine run be made the year round. This motion was also ruled out of order by the chairman, as it contemplated a reduction on September 1.



TENTH ANNUAL REPORT.

129

A motion was then made by Mr. Wear, as follows: That we pay 56 cents a ton for mine-run coal; 95 cents for screened lump over the standard seven-eighths screen. This motion was voted on by the operators, the executive board refusing to take part in the proceeding or entertain the motion, Mr. Wallace claiming that they could not entertain any such proposition.

An intermission of twenty-five minutes was then called, to allow the executive board and operators to confer separately.

After the conference and the meeting had again been called to order the chairman submitted the following proposition: That the miners would accept 54 cents a ton for mine-run coal and 90 cents for lump as a summer price, and 59 cents a ton for mine-run coal and \$1 for lump as a winter price. Said proposition was then discussed, with the result that a counter proposition was made by the operators, under the following motion:

Resolved, that the price of mining agreed on be as follows: Lump coal, winter, 97 cents per ton; lump coal, summer, 87½ cents; mine-run coal, winter, 58 cents; mine-run coal, summer, 52 cents.

The above proposition was made by Mr. Wear and Mr. Devlin.

Motion by Mr. Fogle that a vote of both operators and executive board be taken on this proposition, and the same be made a part of the record.

Mr. Devlin, in behalf of the Mt. Carmel Coal Company, said that he would recommend the signing of a contract on the above basis. The Hamilton & Braidwood Coal Company, by Mr. Braidwood, that he would recommend the acceptance of the same; the Central Coal and Coke Company, the Western Coal and Mining Company, the Graham Coal Company, and the Pittsburg & Midway Coal Company would recommend the acceptance; the Wear Coal Company, that they would sign such a contract; Weir Brothers, that they would sign such a contract; and the executive board, that they would accept such a contract.

It was then moved that a meeting be called at seven o'clock the next evening for the purpose of drawing up a contract and signing the same on behalf of the miners and by the operators; after which the matter was taken up by Mr. McKillop, as to when the semi-monthly pay would go into effect; and it was agreed and understood this would go into effect in the month of September.

Meeting then adjourned until to-morrow evening at seven o'clock.

GEO. WALLACE, *Chairman*.

A: B. KIRKWOOD, *Secretary*.

PITTSBURG, KAN., August 14, 1897.

It is agreed by and between the executive board of the miners of Crawford and Cherokee counties and the operators subscribing hereto, as follows:

That the price of mining coal shall be, for the six winter months, commencing September 1, 1897, 97 cents per ton for screened lump coal over the standard seven-eighths screen; for mine-run coal, 58 cents per ton.

For the six summer months, the price shall be, screened lump 87½ cents per ton; mine-run coal, 52 cents per ton.

That all day work below ground shall not be less than \$2 per day for men.

That all wages shall be paid twice each month.

That all dirt necessary to be handled by miners be paid for at 50 cents per yard or 10 cents per box, or be taken away by the company.

That each company furnish a satisfactory grade of powder.

That this contract shall be in effect for two years.

GEORGE WALLACE, *Chairman*.
J. C. FOGLE.
N. B. TEASDALE.

W. H. TIDEY.
JOHN MANNING.
THOMAS FLYNN.
ALEX. MCKILLOP.



EVAPORATIVE POWER OF KANSAS COALS.

The commercial value of coal is not a criterion of its actual heating power. The cost of mining, distance from market, competition, etc., determine the former, while the latter depends solely upon the coal *per se*. Further, the total amount of heat obtained by the complete combustion of a given amount of coal exceeds largely—often by fully 100 per cent.—the amount usually obtained in practice. Confining ourselves to coal used in the production of steam, this is due to imperfect combustion, to arrangement of grate and heating surface, methods of firing, etc. The same coal in different furnaces may give different results. Duty tests upon any one plant give the relative values of coals for that plant only. There is, however, an important method of comparing the actual heating values of coals which is independent of commercial values and of diversified conditions of burning. It is by measuring the heat given out by coals under perfect combustion, expressed in terms of their evaporative powers. To this end, therefore, it is quite customary to compare coals according to their evaporative powers. By this is meant, how many pounds or kilograms of water at 212° F. will be converted into steam, also at 212° and under 760 mm. pressure, by one pound or one kilogram of coal. The object of the present investigation is to compare coals from the different Kansas veins according to their evaporative powers as defined above.

Specimens were taken from localities as widely distributed as possible over the vein—north, south, east, and west—particularly north and south, as the veins dip west and north. The results may be considered as fair representatives of the whole vein, and also as embracing the principal veins at present worked in the state of Kansas. These results are presented in the table following. For comparison's sake, there are included also tests of the best Indiana block coal (Clay county).

TABLES.

About one-half the evaporative powers here given in first column will be obtained in steam-boilers. Best Indiana block gives 14.43 and 17.04 pounds evaporative power for 10 and 30 per cent. corrections, respectively.



TENTH ANNUAL REPORT.

131

A.—CHEROKEE COALS.

(Pittsburg, Weir City, Scammonville, Frontenac, Stillson, etc.)

Number of sample.	Pounds of water at 212° evaporated per pound of coal. (Correction on apparatus.)		Duration of burning, seconds.	Remarks.
	10 per cent.	30 per cent.		
1.....	13.53	15.97	40	Violent burning.
2.....	13.64	16.10	45	
3.....	13.01	15.35	45	
4.....	13.31	15.71	60	
5.....	13.31	15.71	60	
6.....	13.86	16.36	65	
7.....	13.53	15.97	50	
8.....	13.94	16.45	75	
9.....	13.42	15.84	90	
Averages.....	13.51	15.94	
All samples mixed.....	13.42	15.84	80	

B.—CHEROKEE COALS (upper vein).

(Pittsburg.)

1.....	12.43	14.67	55	
2.....	12.76	15.06	45	
3.....	13.31	15.71	60	
Averages.....	12.83	15.14	.....
All samples mixed.....	12.57	14.80	60	

C.—FORT SCOTT COALS.

1.....	13.64	16.10	65	
2.....	13.09	15.45	60	
3.....	13.86	16.35	55	
Averages.....	13.53	15.97	.....
All samples mixed.....	13.20	15.58	120	

D.—LEAVENWORTH COALS.

1.....	13.36	15.76	75	Brown residue.
2.....	12.25	14.46	80	
3.....	13.86	16.35	65	
Averages.....	12.95	15.52	.....
All samples mixed.....	12.54	14.80	105	

E.—LINN COUNTY COALS.

(Pleasanton, La Cygne, etc.)

1.....	12.76	15.06	60	Brown residue.
2.....	12.76	15.06	70	
3.....	12.87	15.49	80	
4.....	12.54	14.80	75	
Averages.....	12.73	15.10	.....
All samples mixed.....	12.76	15.06	100	



F.—OSAGE COUNTY COALS.

(Osage City, Scranton, Carbondale, Burlingame, etc.)

Number of sample.	Pounds of water at 212° evaporated per pound of coal. (Correction on apparatus.)		Duration of burning seconds.	Remarks.
	10 per cent.	30 per cent.		
1.....	11.88	14.02	110	Brown residue.
2.....	10.96	12.93	90	" "
3.....	12.98	15.32	120	" "
4.....	11.66	13.76	120	" "
5.....	12.43	14.67	120	" "
6.....	11.99	14.15	165	" "
7.....	11.66	13.76	120	" "
8.....	11.88	14.02	120	" "
9.....	11.55	13.63	70	" "
10.....	11.44	13.50	80	" "
11.....	11.66	13.76	105	" "
Averages.....	11.76	13.96	.....
All samples mixed.....	12.10	14.28	135	

G.—FRANKLIN COUNTY COAL.

1.....	12.32	14.54	125	
--------	-------	-------	-----	--

H.—CLOUD COUNTY COAL.

1.....	9.90	11.68	135	
--------	------	-------	-----	--

SUMMARY.

From these results, the Kansas coals thus far examined are to be arranged in the order following as regards their evaporative powers. About one-half the evaporative powers here given under the 10-per-cent. correction will be obtained in practice.

Name of coal.	Table.	Pounds water evaporated per pound of coal.		Duration of burning, seconds.	Calories gram, degrees centigrade.	
		10 per cent.	30 per cent.		Correction.	
					10 per cent.	30 per cent.
1. Cherokee.....	A.	13.42	15.84	65	7206	8506
2. Fort Scott.....	C.	13.20	15.58	60	7088	8364
3. Linn county.....	E.	12.76	15.06	65	6852	8105
4. Cherokee, upper vein,	B. }	12.54	14.80	50	6734	7946
Leavenworth.....	D. }			75		
5. Franklin county.....	G.	12.32	14.54	125	6615	7806
6. Osage county.....	F.	12.10	14.28	115	6498	7668
7. Cloud county.....	H.	9.90	11.68	135	5316	6273
For comparison:						
Best Indiana block						
(Clay county).....		14.43	17.03	.....	7749	9144

The coals depreciated in their steam-producing powers from the southern part of the state toward the north and west. Professor Bailey finds they depreciate in the amount of fixed carbon in a similar order.



TENTH ANNUAL REPORT.

133

COMPOSITION OF KANSAS COALS.

Name.	Water.	Volatile.	Fixed carbon.	Ash.
Cherokee.....	1.94	36.77	52.45	8.84
Cherokee (upper vein).....	2.08	35.32	48.64	13.96
Fort Scott.....	2.94	41.76	47.55	7.75
Leavenworth county.....	2.69	39.21	47.41	10.69
Linn county.....	2.07	39.42	46.89	11.62
Osage county.....	6.76	41.59	40.86	10.79
Franklin county.....	7.55	44.40	37.68	10.37
Cloud county.....	13.70	46.14	28.52	11.64
Pittsburg, Pa.....	1.31	36.61	54.17	7.91
Nebraska.....	4.93	38.17	49.44	7.46
Warren county, Missouri.....	6.75	36.40	45.75	11.10

If the water and ash are eliminated in the calculation from the above results, as is suggested in a recent report of the Pennsylvania geological survey, the coals of Kansas will be divided into five groups. In the first group are included the Cherokee coals; in the second, Fort Scott, Leavenworth and Linn counties; in the third, Osage county; in the fourth, Franklin county; and in the fifth, Cloud county.

The coals found in the extreme southeast are richer in fixed carbon or coke, and this diminishes as we go toward the northwest. On the other hand, the volatile matter is more abundant compared with the fixed carbon in the upper or northern coals. There is uniformly more water in the Osage county coal and in those above it than in the lower coals. In regard to ash, Cherokee and Fort Scott contain the least; the others contain from 10 to 12 per cent.

ANALYSIS, SPECIFIC GRAVITY, ETC., OF KANSAS COALS.

NAME OF MINING COMPANY.	Location.	Per cent. of sulphur.	Specific gravity.	Weight of one cubic foot.
				(Pounds.)
Southwest. Coal and Imp. Co..	Mineral.....	1.007	1.338	83.625
James O'Neil.....	Cherokee.....	2.678	1.399	87.437
Land and Improvement Co.....	".....	1.460	1.284	80.250
Columbus Coal Co.....	Stepville.....	0.684	1.278	79.895
C. C. & Coke Co.....	Scammon.....	1.894	1.322	82.625
Graham Coal Co.....	".....	1.616	1.336	83.500
Stone & Dixon Coal Co.....	".....	1.288	1.343	83.937
Kansas & Texas, No. 18.....	Weir City.....	2.551	1.296	81.100
" " No. 47.....	".....	0.765	1.281	78.062
Weir Junction Coal Co.....	".....	1.056	1.299	81.187
Western Coal & Mining Co.....	Pittsburg.....	1.394	1.286	81.375
Hamilton & Braidwood Coal Co., No. 2.....	Weir City.....	1.244	1.344	84.000
C. C. & Coke Co., No. 5.....	".....	2.557	1.343	83.934
Durkee Coal Co., No. 1.....	".....	2.787	1.319	82.747
Excelsior Coal Co.....	".....	1.715	1.285	80.312
Mt. Carmel C. & M. Co., No. 5,	Chicopee.....	1.381	1.382	86.375
" " " No. 1,	Frontenac.....	2.329	1.337	83.562
Kansas & Texas, No. 20.....	Pittsburg.....	1.867	1.310	81.875
Strip coal.....	".....	1.513	1.017	63.562
Pittsburg & Midway C. & M. Co.	Midway.....	1.616	1.336	83.500
Sennatt Bros., No. 3.....	Cornell.....	1.560	1.321	82.565
Morganville Coal Co.....	Morganville.....	0.942	1.261	78.832
Bell Coal Co.....	Coalvale.....	2.376	1.276	79.750
Company unknown.....	Pleasanton.....	0.956	1.352	84.500
State mine.....	Lansing.....	1.197	1.319	82.637
Kansas Commercial Coal Co....	Fuller.....	1.022	1.302	81.375
Anthracite, taken from seam next to "Bell".....	Leavenworth.....		1.400	87.500



This letter will explain the analysis table on page 133:

LAWRENCE, KAN., February 9, 1898.

Hon. G. T. McGrath, State Mine Inspector, Weir City, Kan.:

DEAR SIR—The analyses we have made of the Kansas coals here in our laboratory shows the following per cent. of sulphur. It should be understood, however, that this does not refer to the so-called "sulphur rock," which in all cases was excluded from the samples to be analyzed. The best estimate I can give you of the weight of a cubic foot of coal is about calculated from the specific gravity, which, while possibly not absolutely correct, is yet almost so. The difficulty in determining this exactly is that it is so hard to find a small sample for testing which is uniform with the volume. Hoping this will be satisfactory, I remain,

Yours very truly,

ERASMUS HAWORTH.

SUMMARY OF COAL MINED, AND MINERS' WAGES, FOR THE YEAR 1897.

Office No.....	Counties.	Gross number of tons mined in each county (short tons).	Employees.				Value of coal at mine (mine run).	Casualties.	
			Miners....	Boys.....	All others..	Total.....		Killed....	Injured....
1	Crawford.....	1,590,620½	2,393	48	614	3,138	\$1,566,761 44	4	13
2	Cherokee.....	1,040,409	1,815	71	467	2,354	998,792 64	1	4
3	Osage.....	181,857	1,288	65	108	1,462	300,974 15½	.....	7
4	Leavenworth.....	367,141	762	15	295	1,072	460,761 95½	1	7
5	Brown.....	2,300	15	.....	.....	15	4,600 00	.....	.....
6	Chautauqua.....	1,200	27	.....	.....	27	3,000 00	.....	.....
7	Labette.....	2,000	30	.....	.....	30	6,000 00	.....	.....
8	Republic.....	1,300	12	.....	.....	12	2,925 00	.....	.....
9	Bourbon.....	28,483	100	.....	100	200	26,966 00	.....	.....
10	Lincoln.....	750	13	.....	8	21	2,250 00	.....	.....
11	Shawnee.....	804	15	.....	5	20	2,146 68	.....	.....
12	Franklin.....	6,452	48	3	8	59	12,097 50	.....	.....
13	Lyon.....	835	14	.....	5	19	1,878 75	.....	.....
14	Ellsworth.....	1,427	22	1	4	27	4,281 00	.....	.....
15	Elk.....	320	4	.....	1	5	800 00	.....	.....
16	Russell.....	181	9	1	2	12	543 00	.....	.....
17	Atchison.....	5,152	45	.....	4	49	12,880 00	.....	.....
18	Linn.....	26,775	81	.....	14	95	29,452 50	.....	.....
19	Cloud.....	2,800	22	2	3	27	6,300 00	.....	.....
20	Coffey.....	10,000	35	.....	20	55	22,500 00	.....	.....
	Totals.....	3,270,806	6,750	206	1,658	8,609	\$3,465,910 71	6	31



TENTH ANNUAL REPORT.

135

SUMMARY OF COAL MINED, AND WAGES, FOR THE YEAR 1897—CONTINUED.

Office No.....	COUNTIES.	Average price paid per ton for mining.		Number of days miners worked during year....	Number of kegs of powder used.	Value of powder (\$2 per keg).....	Average paid day men underground.....	Average paid day men above ground.....	Estimated value of mines and fixtures outside of tenement houses.....	Tons of coal produced for each fatal accident..
		Lump.	Mine run.							
1	Crawford.....	\$0 92½	\$0 55	4,327	87,272	174,544	\$2 00	\$1 48	\$509,740	\$397,655
2	Cherokee.....	92½	55	3,910	65,894½	131,789	2 00	1 60	417,150	1,040,409
3	Osage	1 12½		4,966	91	182	1 89	1 65½	68,230	
4	Leavenworth ..		80	734	*9,000	600	2 00	1 75	280,000	183,570½
5	Brown.....	1 50		160					300	
6	Chautauqua ..	2 00		75					500	
7	Labette	2 00		100					500	
8	Republic.....	1 50		100					300	
9	Bourbon.....	1 25		150						
10	Lincoln	2 00		385			1 75	1 50	2,000	
11	Shawnee	1 70		357	2	4	1 75	1 50	900	
12	Franklin	1 25		617	25	50	1 75	1 50	5,250	
13	Lyon.....	1 73½		185	3	6	1 75	1 50	3,600	
14	Ellsworth.....	2 00		331	2	4	1 75	1 50	1,840	
15	Elk.....	1 75		60	1	2	1 75	1 50	1,200	
16	Russell.....	2 12½		101			1 75	1 50	600	
17	Atchison	1 25		410	13		1 75	1 50	2,600	
18	Lynn	75		445	18	36	1 75	1 50	30,500	
19	Cloud	1 30		320			1 75	1 50	2,100	
20	Coffey.....	1 25		250	2	4	1 75	1 50	3,000	
	Totals.....			17,993	156,323	307,221			\$1,330,310	

*Giant, pounds.



SUMMARY OF COAL MINED, AND MINERS' WAGES, FOR YEAR 1897—CONTINUED.

Office No.....	Counties.	Tons of coal produced for each non-fatal accident.....	Av. No. of days mine worked during the year.	Gross earnings per annum per miner.....	Total wages of all the miners in each county.	Net earnings of each miner after deducting mine expenses.....	Average wages for each day's work.....	Per cent. of mining expenses...	Total mining expense of each miner for time worked.....
1	Crawford.....	122,355	140	\$365 58½	\$574,844 90	\$272 20	\$1 94½	25.5%	\$93 38
2	Cherokee.....	260,102	162	315 28	572,224 95	221 67	1 37	29.1%	93 61
3	Osage.....	25,979	124	158 84½	204,589 14	142 26	1 15	10	16 58
4	Leavenworth...	52,448	183	424 50	241,808 80	401 45	2 19	5½	23 05
5	Brown.....		53	230 00	3,450 00				
6	Chautauqua....		37½	88 89	2,400 03				
7	Labette.....		50	133 33	3,999 90				
8	Republic.....		100	162 50	1,950 00				
9	Bourbon.....		150	178 02	17,802 00				
10	Lincoln.....		98	115 38	1,499 94				
11	Shawnee.....		89	91 12	1,366 80	78 87	88½	10½	12 25
12	Franklin.....		102	168 02	8,064 96	154 98	1 52	8	13 04
13	Lyon.....		62	103 18	1,444 52	90 78	1 46½	12	12 40
14	Ellsworth.....		110	129 72	2,853 84	137 52	1 25	10	12 20
15	Elk.....		60	140 00	560 00	127 50	2 12½	9	12 50
16	Russell.....		50	47 76	429 87	43 76	87½	8½	4 00
17	Atchison.....		205	143 11	6,439 95				
18	Linn.....		148	147 91	20,080 71	235 46	1 59	5½	12 45
19	Cloud.....		106	165 45	3,639 90				
20	Coffey.....		125	227 27	7,954 45	215 15	1 72	5½	12 12
	Totals.....				\$1,977,413 66				



TENTH ANNUAL REPORT.

137

SUMMARY OF COAL MINED, AND MINERS' WAGES, FOR YEAR 1897—CONCLUDED.

Office No.....	Counties.	Average wages per day for each miner in the county.	Total wages earned by day men underground.	Net earnings of each day man underground per year.	Total amount of wages earned by day men above ground.	Net earnings of each day man above ground.	Average wages per year for day men underground.	Average wages per year for day men above ground.
1	Crawford	\$0 87.80	\$87,640 00	\$280 00	\$62,367 20	\$207 20	\$0 90.32	\$0 66.90
2	Cherokee	71.19	82,944 00	324 00	54,691 20	259 20	1 04.52	83.61
3	Osage	45.80	16,639 56	234 36	7,798 36	205 22	75.60	66.20
4	Leavenworth...	1 29.50	30,520 00	436 00	15,641 50	381 50	14.06	1 23.06
5	Brown							
6	Chautauqua...							
7	Labette.....							
8	Republic.....							
9	Bourbon.....							
10	Lincoln.....		686 00	171 50	588 00	147 00	55.32	47.41
11	Shawnee.....	25.50	311 50	155 75	400 50	133 50	52.41	43.06
12	Franklin.....	49.98	1,071 00	178 50	306 00	153 00	57.58	49.35
13	Lyon.....	29 20	325 50	108 50	93 00	46 50	35	15
14	Ellsworth.....	44 30	325 50	108 50	93 00	46 50	35	15
15	Elk.....	41.10	105 00	105 00			33.87	
16	Russell.....	14.20	87 50	43 75	75 00	75 00	14.11	24.19
17	Atchison.....		1,076 25	358 75	307 50	307 50	11.57	99.19
18	Linn.....	75.90	2,072 00	259 00	1,332 00	222 00	83.54	71.61
19	Cloud.....		556 50	185 50	318 00	159 00	59.83	51.29
20	Coffey.....	69.40						
	Totals.....		\$214,360 31		\$142,742 26			

Leavenworth county averages as to earnings, etc., are based on the operations of the free mines only.

The items "miners' mining expenses" consist of powder, blacksmithing, oil, and renewing and repairing tools.

The aggregate cost of powder reports were filed by the operators and by me apportioned *pro rata* to all the miners using it.

The cost of blacksmithing is fixed by custom at one dollar per month or major fraction of a month for each miner.

The cost of oil for lamps is estimated on an average of one-half pint per day for each miner, for six months, at a rate of sixty-five cents per gallon.

The cost of renewing and repairing tools is estimated for each miner at \$8.10 per year.

This estimate of expenses applies to Cherokee and Crawford counties as mining is now carried on there, the cost of powder and tools in these counties being greater than required for mining in other counties. All other counties are proportioned accordingly with their expenses.

The reason for the low average for the number of days worked for each county is that so many mines load only commercial coal, thereby reducing the average of the mines that load railroad coal.

Graham Coal Company made a clerical error of 21,000 tons of coal, and corrected the same after this table was closed, making it short 21,000 tons.



RECOMMENDATIONS.

REGARDING THE MINING LAWS.

The mining laws of the state are far from being perfect. From time to time the laws have been amended and made some better, and new laws enacted intended to bring justice to the miners, and bring a more safe and healthy condition, and reduce the loss of life and accidents in and around the coal-mines. The Inspector finds, from practical experience, there is room for improvement in order that some of these laws may reach the object that they were enacted for.

THE SHOT-FIRING LAW.

This is one of the best laws in the state for both the miner and operator, though the Inspector is sorry to say that many of the miners will violate the same, and then swear that they did not do so; and then again, the shot-firer, instead of using the precaution and judgment that this law intended him to use, will as a rule start in to fire shots that he is paid ten hours' work for firing as though the work had to be done in one hour, and will tamp up and light all the shots that are in one place at one time, which is very often as high as three and four shots in one working-place, and he is in such a hurry that he usually does not take the time to notice whether the shot is a lawful one or not, thereby endangering his own life and the lives of other shot-firers; and should any one of these shots miss, as they usually do from being false tamped or from being knocked out by the flying coal from another shot, he will rush back into the working-place to try and find and fire the missed shot, and in many instances he is overcome by the powder smoke and gases from burnt powder, and has a hard time to get out of the place before he is overcome and loses his life.

Now, the Inspector would recommend that this law be so amended that the shot-firer shall not be allowed to fire more than one shot in one working-place at one time; and after he has fired one round over the part of the mine that he is firing he can again start and fire another round, and continue on until his work is done, by firing one shot at a time in any room, entry, or working-place. This will reduce the number of casualties, and the mine will be less liable to an explosion. Also, provide a penalty for coal companies' officials leaving squibs where the miner can get them for the purpose of firing his own shots.

State inspector of coal mines reports

TENTH ANNUAL REPORT.

139

THE LAW REGULATING THE NUMBER OF POUNDS OF POWDER THAT SHALL BE TAKEN INTO THE MINE AT ONE TIME.

The Inspector finds this law violated in some places by the company giving out a full keg of powder at one time, which contains twenty-five pounds, although the miners are provided with a powder house, with a place for each man's powder pigeonholed off large enough for a keg of powder. The miner is supposed to have his keg of powder, and take one half into the mine at one time, and leave the remaining half; but at some mines it seems that if a miner complies with this law, and leaves his powder, the next morning when he comes after it he finds that some one has stolen his powder; and as the miner's expense is large, and he cannot afford to lose his powder, he will violate the law the next time by making a hole in the keg and putting a corn-cob or a bunch of hay into it—he will make it appear that he has halved his powder—and carry the whole keg into the mine. This in a short time will become common, and he will not go to the trouble of putting a hole into the keg, but will walk boldly off with his keg of powder and take the same into the mine.

The Inspector believes the companies are largely to blame for this violation of the law, and cannot out of justice blame the miner; and in order that this violation be stopped, the Inspector would recommend that the company be not allowed to give out more than $12\frac{1}{2}$ pounds of powder to each miner each morning; this powder to be placed in a powder can that is generally used for that purpose, as many of the larger companies are now doing, and adding a penalty for the violation of the same.

WEIGHING OF COAL AT THE MINE.

There is no law connected with mining that is more unsatisfactory than the present weighing of coal at the mine, and a change that would give justice would tend more to harmonize the two elements. The enactment of the law giving the miners the right to have a check weighman, to stand at the scales as their representative and see that the company weighman weighed the coal correctly, would solve the problem. It is a step in the right direction, but does not go far enough, as is manifested by the numerous complaints, trouble, and even strikes, over the appointment of a check weighman and the method that is used at many mines in the weighing of coal. This has been a bone of contention between the operators and the miners wherever coal is weighed. We must adopt a method which will be absolutely just to both the operator and miner, while destroying the opportunity and removing the temptation to defraud on the part of either the miner or the operator.

As the weighing of coal is being done now in a majority of places,



State inspector of coal mines reports

140

INSPECTOR OF COAL-MINES.

it will always be unsatisfactory to the miner. In many places where coal is weighed before being screened a small platform scale is used, and is usually just wide enough for the car, and the coal could be properly weighed if the car was stopped; but as this takes up too much time, and as the companies have always been opposed to the coal being weighed before being screened, the car is permitted to come off of the cage and pass right on over the scale, and is dumped, and the weights are oftener guessed at than they are correctly weighed. The law allows the miners to have a check weighman, but in the majority of cases he is only a figurehead; for if he insists upon the coal being correctly weighed the company will usually find fault with him, and then there is friction between the miners and the company, and after a few days of enforced idleness, if they will select another check weighman who is not objectionable to the company, they may resume work. The necessities of the workmen force them to give way, and agree with their employer to resume work with a check weighman that will have to stand by and see the law nullified; then the miners will say there is no use to have a check weighman if he cannot have their coal correctly weighed; and in some instances the men become discouraged and refuse to pay the check weighman, and the result is they work along without a check weighman, leaving the company weighman to weigh the coal as he pleases.

It seems impossible to legislate against action of this character, as any law which is intended for the laboring man and interferes with the right to contract or arrange with his employer for his labor is immediately declared unconstitutional, null, and void. In the face of all of this bone of contention over the weighing of coal at the mines, and the many unpleasant difficulties arising from the weighing of coal, the Inspector feels justified in recommending an amendment to the law regulating the weighing of the coal at the mine, by creating an adjuster of weights and measures, with full power to adjust the scales and compel all coal companies to correctly weigh the coal; also, to make all coal companies stop the mine-car on the scales long enough for it to be correctly weighed, or dump it into a hopper that is so constructed that coal can be correctly weighed and then dumped out over their screens; also, providing a heavy penalty for any violation of the same.

THE USE OF TWO CHECK BOARDS AT THE MINES, FOR THE PURPOSE OF KNOWING THE NUMBER OF EMPLOYEES IN THE MINE AND WHEN ALL ARE OUT.

It has been suggested by some of the miners to the Inspector that he recommend for enactment into law the use of two check boards at every mine in the state, for the purpose of knowing the number of employees that were at work in the mine during the day, also for the



State inspector of coal mines reports

TENTH ANNUAL REPORT.

141

purpose of knowing when all of the employees are out, and that every miner and underground laborer be furnished with a check. This check in the morning must be hung on a board, convenient for the employees to take off when entering into the mine; at the bottom of the mine this check must be deposited upon another board, which would indicate that that man was at work in the mine; and after that employee is through with his day's work and comes out he will take the check off the board at bottom of mine and deposit it upon the board at top of mine. This would show when all employees were out of the mine, and when the day's work is done, and when all men are out of the mine, there would be no checks upon the board at the bottom of the mine; and when the shot-firers go into the mine in the evening to fire shots they must first look at this board; and if all checks are not taken off they must go and see why the miner or mine laborer is not out, before firing. The shot-firer will very soon become acquainted with every man's working-place in the mine by his number, and could very readily locate the employee who was not out.

This matter has been suggested on account of accidents by men being caught under slate, and no one would know but what they had gone out of the mine and gone home; and if an accident did occur to any of the miners there would be no shot mark at his working-place. The shot-firer would pass by and not go into the room or working-place, and the miner would not be missed until his friends came hunting for him; and if the man lived a couple of miles away from the mine, as many do, it would be late before any one came to hunt him. If this rule was enacted into law and was applied he would be missed at firing time, and it might be the means of saving his life. Upon idle days, the mine foreman or some one empowered by him would see that all underground employees were out before he left. This law should be so constructed that no employee be allowed in the mine at work without being compelled to comply with this law; also, have this law so framed that if an employee wilfully violated the same he be punishable by twenty days' imprisonment for first offense; and also make it a fine and imprisonment for any coal company doing business in this state that will not provide the two check boards and checks and see that the law was enforced, or allowing the same to be violated.

It is the opinion of the Inspector that a law of this kind would be a benefit to both the employee and the employer, and would be the means of stopping employees from going down air-shafts into the mine for the purpose of working at night, and in many instances firing their own shots, violating the present laws and endangering their own lives. This law would work no inconvenience or expense to either employee or employer if enacted into law, but would be a great benefit to the miners and also to the companies; for they would al-

State inspector of coal mines reports

142

INSPECTOR OF COAL-MINES.

ways know when a man was in the mine, and would do away with a great deal of unpleasantness that now exists in this district, by miners sneaking into the mine for the purpose of doing work that is not allowed by law nor recognized by custom.

SINGLE-ENTRY SYSTEM.

The mining law of our state in relation to coal-mines, in its full spirit, was and is intended for the health and safety of those employed in the mines. Some of our large coal-mines are worked upon the single-entry system, and the area of the mines is large. It is an indisputable fact that the single-entry system was an old and worn-out method of coal-mining many years ago, and that it is a complete failure in the maintaining of good ventilation where the area of the mine is large, and also is very injurious to the miners' health; also, that many acres of coal are left when the miner is compelled to vacate his working-place for lack of proper ventilation, and it is then too expensive to properly connect it up so that it can be ventilated. This method of mining is adopted for the purpose of saving a little yard work upon double entry. This saving will work for a little while when the mine is new, but soon becomes a failure, and will then cost as much as a well-systematized mine in order to maintain ventilation; and many of the miners are slowly poisoned, for the want of pure air to dilute and carry off the poisonous gases that generate from stagnant water and old workings and other causes. This fact has dawned upon many of the large coal operators; for years they have found that no part of capital invested yields a higher rate of interest than that which is judiciously expended on ventilation, and to-day the majority of coal operators whose mines are operated upon the room-and-pillar system recognize this fact, and they cause their mines to be operated by double entry, thereby being able at all times to carry a good current of air up to the last cross-cut in entries.

Now, in view of the fact that wherever the Inspector finds the single-entry system he finds poor ventilation in a majority of the working-places in the mine, he would recommend the enactment of a law that would forever destroy the single-entry system in this state, where coal is mined upon the room-and-pillar plan. The passage of a law of this kind, with a heavy penalty for its violation, and giving the Inspector power to close the mine from further operation until they complied with the law, would be a humane act for the miner and his family, and I urge some action be taken on the same.

DUTIES OF INSPECTOR OF MINES.

Chapter 149, section 18, of the General Statutes, relating to coal-mines and mining, provides that it shall be the duty of the Inspector to visit each mine twice each year. Now, the coal productions of



State inspector of coal mines reports

TENTH ANNUAL REPORT.

143

Kansas are scattered over twenty counties. The four principal counties are Crawford, Cherokee, Leavenworth, and Osage. The coal production of these four counties is 3,201,027 short tons of coal, against 90,775 tons of coal in the other sixteen counties, or 97.24 per cent. against 2.76 per cent. It is an impossibility for a man to do this work as is required by law, as the area of some of those mines in the large coal-producing counties is large, and in order to give them a cursory inspection it takes from one to three days, and the distance between these mines is from one to four hundred miles. Many times when the Inspector is in one part of the state he is called back to the other to examine the cause of an accident.

When this law was enacted the coal production of Kansas was in its infancy, being, in 1880, only 550,000 tons; to-day the coal production of this state is 3,291,806 tons, an increase of 2,741,806 tons, or 83.29 per cent. The mining laws of this state have been amended from time to time, but no assistance has been given to the Mine Inspector in the way of help to assist him to do the work as the law requires; and the law is not too strong, as the mines ought to be visited and examined three or four times a year. In addition, the Mine Inspector has to correspond with every operator in the state four times a year, and with many of them more than that. Also, he has to drop his work of inspection, less answer calls, while he compiles his report and gets it ready for the state printer. This report must be a statistical report of everything in connection with the mines and the coal industry of Kansas, which is increasing every year. Now, in view of these facts, and in order to comply with the law, I would recommend an addition to the office of Mine Inspector of one Assistant Mine Inspector and one clerk, to assist in doing the office work while the Inspector was making examination of and inspecting mines.

Also, from the fact that lead and zinc mining of this state has become quite large, and produced in 1897 about \$2,500,000 worth of lead and zinc, and gives employment to a large number of employees, and is still increasing, loss of life and injury to miners being common among their mines, caused from being knocked down from bad air and powder smoke and from the results of poor timbering in mines, and there being no law to make the operators furnish a better system of ventilation, nor to make them do better timbering—in view of these facts, I would urge that the mining law be so amended as to include all lead, zinc and salt mines. If the legislature sees fit to amend the mining laws to include the mines referred to, I would recommend two Assistant Mine Inspectors instead of one, making three to look after the health and safety of the miners at all mines in the state.



State inspector of coal mines reports

144

INSPECTOR OF COAL-MINES.

THE HOME MINING COMPANY.

I recommend the repeal of chapter 148 of the Laws of 1891, which is as follows:

SECTION 1. The state of Kansas hereby grants to the Home Mining Company, a corporation organized and existing under the laws of the state of Kansas and having its principal place of business in the city and county of Leavenworth, said state, its successors and assigns, all its interest in the beds, veins or strata of coal underlying the bed of the Missouri river, within the following boundaries: On the north, a line which is the projection eastwardly to the east bank of the said Missouri river at ordinary high-water mark of the center line of Delaware street in the city of Leavenworth, in the state of Kansas; on the east, a line which is the center line of the main channel of said river; on the west, the bank of said river at ordinary high-water mark; on the south, a line which is the projection eastwardly to the east bank of said river at ordinary high-water mark of the center line of Pennsylvania street, formerly known as Mary street, in Rees, Doniphan & Thornton's addition to said city of Leavenworth; together with the right to mine for said coal, and open, make and maintain all passages, tunnels, gangways, chambers, rooms, drifts and excavations necessary and proper for the mining and removing of said coal, and for access to beds of coal on territory adjacent to that hereby granted.

SEC. 2. This act shall take effect from and after its publication in the official state paper.

Approved March 4, 1891, and published March 5, 1891.

Upon the face of this law is written a steal from the state of Kansas, by the Home-Riverside Coal Company, of a mineral grant that amounts to many thousands of dollars in royalty for coal taken out from under state land. From the lines described by the above act, this coal company had given to them all of the privileges and rights that the state of Kansas owned in the river-bed for over one mile in length upon the river, opposite this coal company's mines Nos. 1 and 2, and for a long distance north of both of their mines. They got this grant through the legislature for the purpose of driving a tunnel from one mine to the other at an average width of from six to twelve feet, drove upon an average of eight feet wide, to be used in case of accident as an escapement from one mine to the other. Now, I would recommend the repeal of this special privilege less the amount of coal stratum that is now used for a tunnel; also, would recommend that this company be allowed to continue on mining out this coal under state lands, or that which is under the river that belongs to the state, by the company paying one-fourth of a cent per bushel royalty for the privilege of taking out this coal—one cubic foot of coal to be figured as one bushel; and all money received from this coal company or any other for the privilege of mining this coal be paid into the school fund of the state of Kansas. Had one-fourth of a cent per bushel been paid for the coal they have already taken out that formerly did belong to the state, it would have increased the school fund many thousand dollars, thereby benefiting the taxpayers of the state.